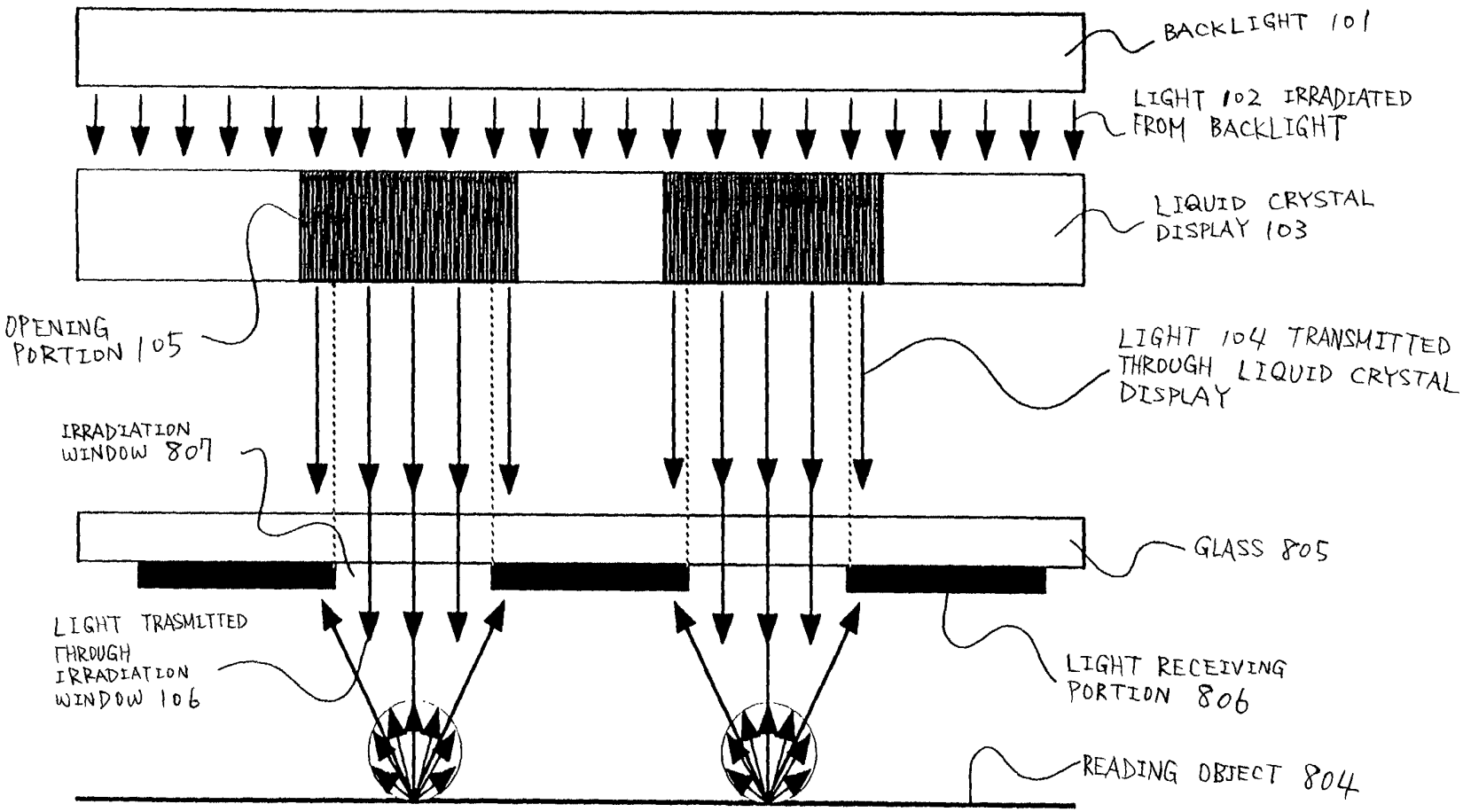
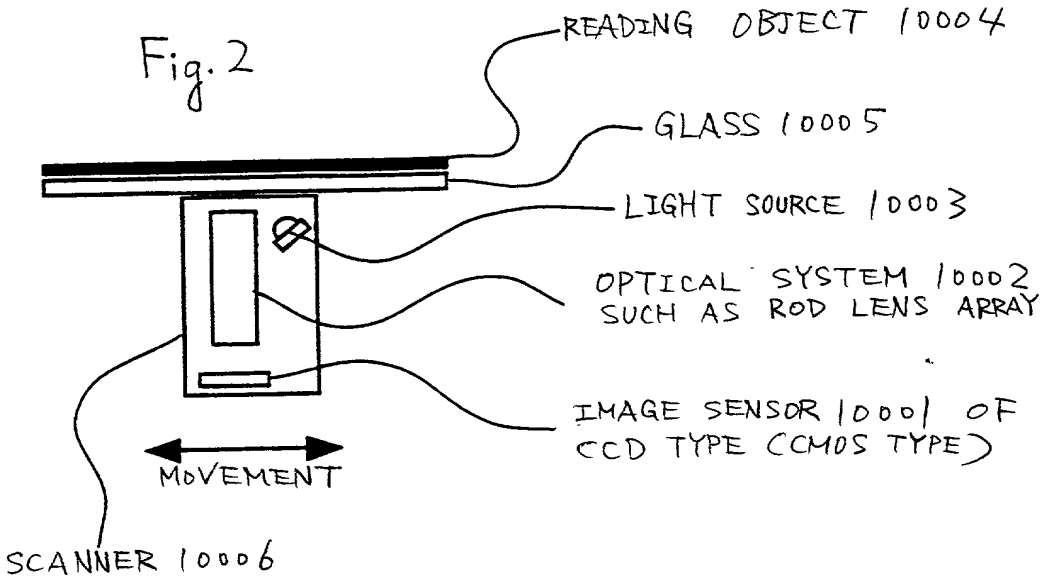


Fig. 1

Fig. 2


READING OBJECT 10004
GLASS 10005
LIGHT SOURCE 10003
OPTICAL SYSTEM 10002
SUCH AS ROD LENS ARRAY
IMAGE SENSOR 10001 OF
CCD TYPE (CMOS TYPE)
MOVEMENT
SCANNER 10006

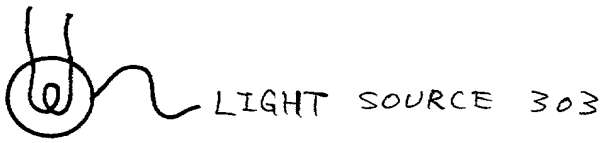
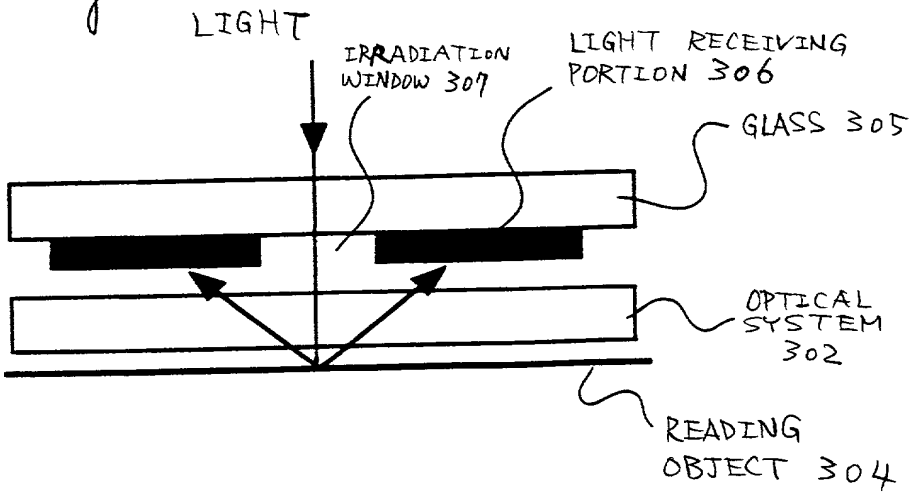

LIGHT SOURCE 303

Fig. 3


LIGHT
IRRADIATION WINDOW 307
LIGHT RECEIVING PORTION 306
GLASS 305
OPTICAL SYSTEM 302
READING OBJECT 304

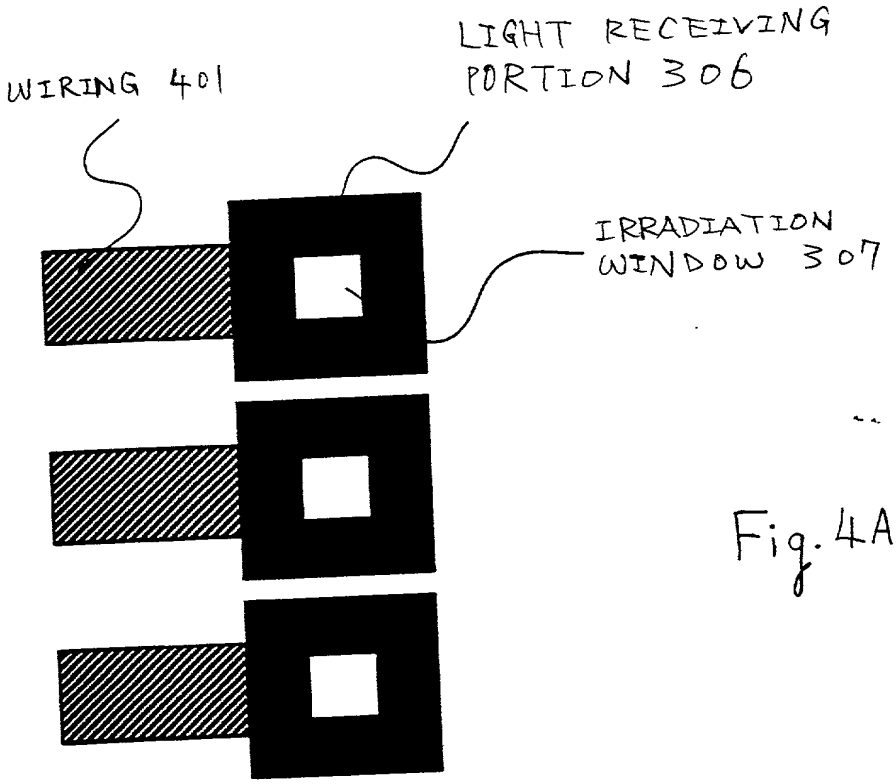

WIRING 401
LIGHT RECEIVING PORTION 306
IRRADIATION WINDOW 307

Fig. 4A

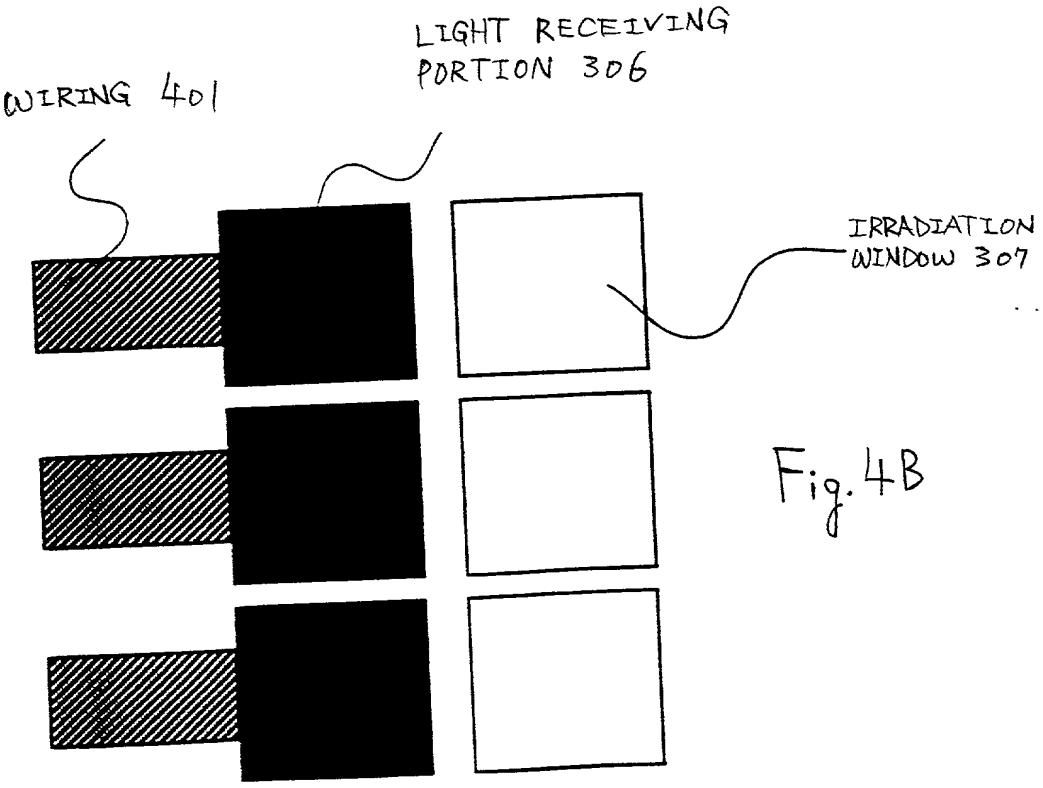

WIRING 401
LIGHT RECEIVING PORTION 306
IRRADIATION WINDOW 307

Fig. 4B

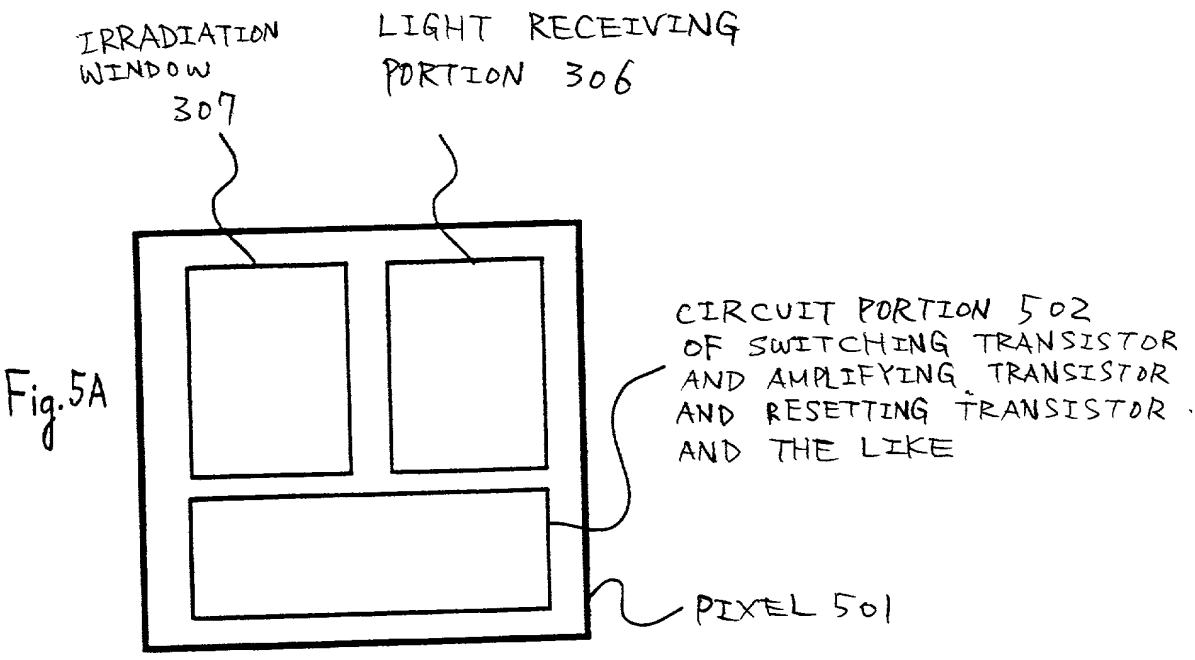

IRRADIATION WINDOW 307
LIGHT RECEIVING PORTION 306
CIRCUIT PORTION 502 OF SWITCHING TRANSISTOR AND AMPLIFYING TRANSISTOR AND RESETTING TRANSISTOR AND THE LIKE
PIXEL 501

Fig.5A

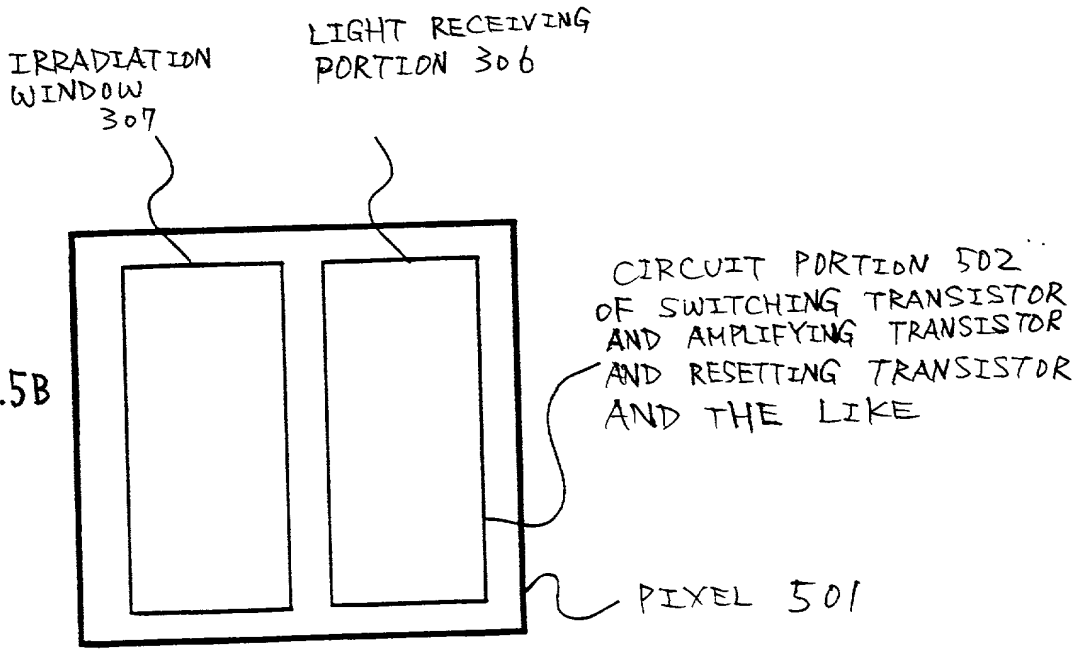

IRRADIATION WINDOW 307
LIGHT RECEIVING PORTION 306
CIRCUIT PORTION 502 OF SWITCHING TRANSISTOR AND AMPLIFYING TRANSISTOR AND RESETTING TRANSISTOR AND THE LIKE
PIXEL 501

Fig.5B

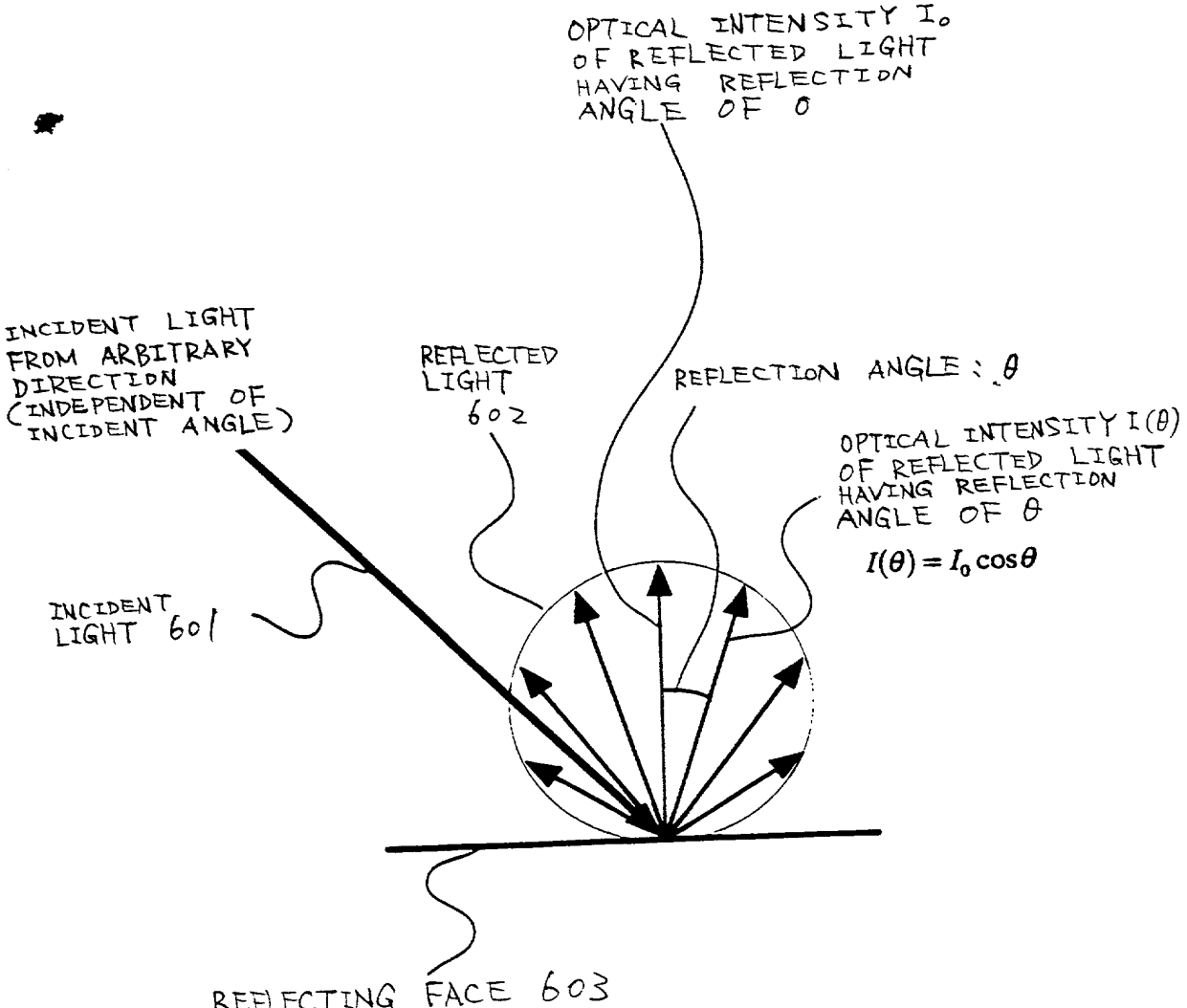

OPTICAL INTENSITY I_0 OF REFLECTED LIGHT HAVING REFLECTION ANGLE OF 0
INCIDENT LIGHT FROM ARBITRARY DIRECTION (INDEPENDENT OF INCIDENT ANGLE)
REFLECTED LIGHT 602
REFLECTION ANGLE : θ
OPTICAL INTENSITY $I(\theta)$ OF REFLECTED LIGHT HAVING REFLECTION ANGLE OF θ
$I(\theta) = I_0 \cos\theta$
INCIDENT LIGHT 601
REFLECTING FACE 603

Fig. 6

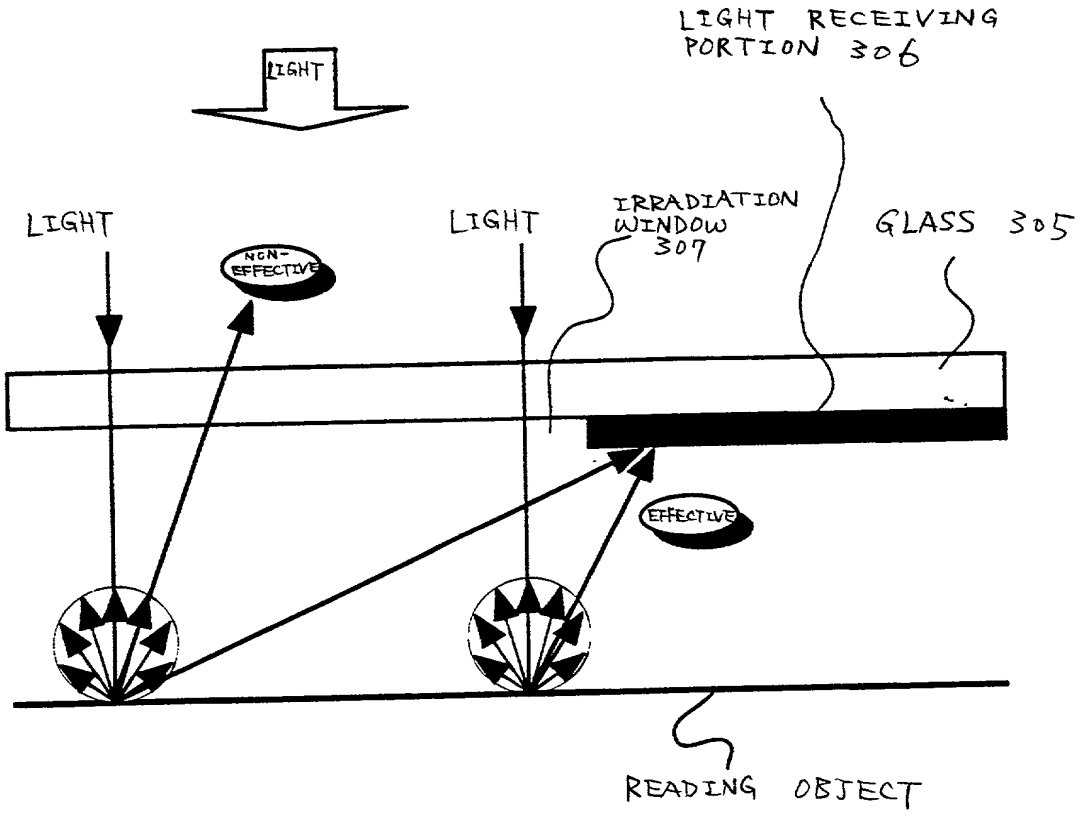

LIGHT RECEIVING PORTION 306
LIGHT
LIGHT
LIGHT
IRRADIATION WINDOW 307
GLASS 305
NON-EFFECTIVE
EFFECTIVE
READING OBJECT

Fig. 7

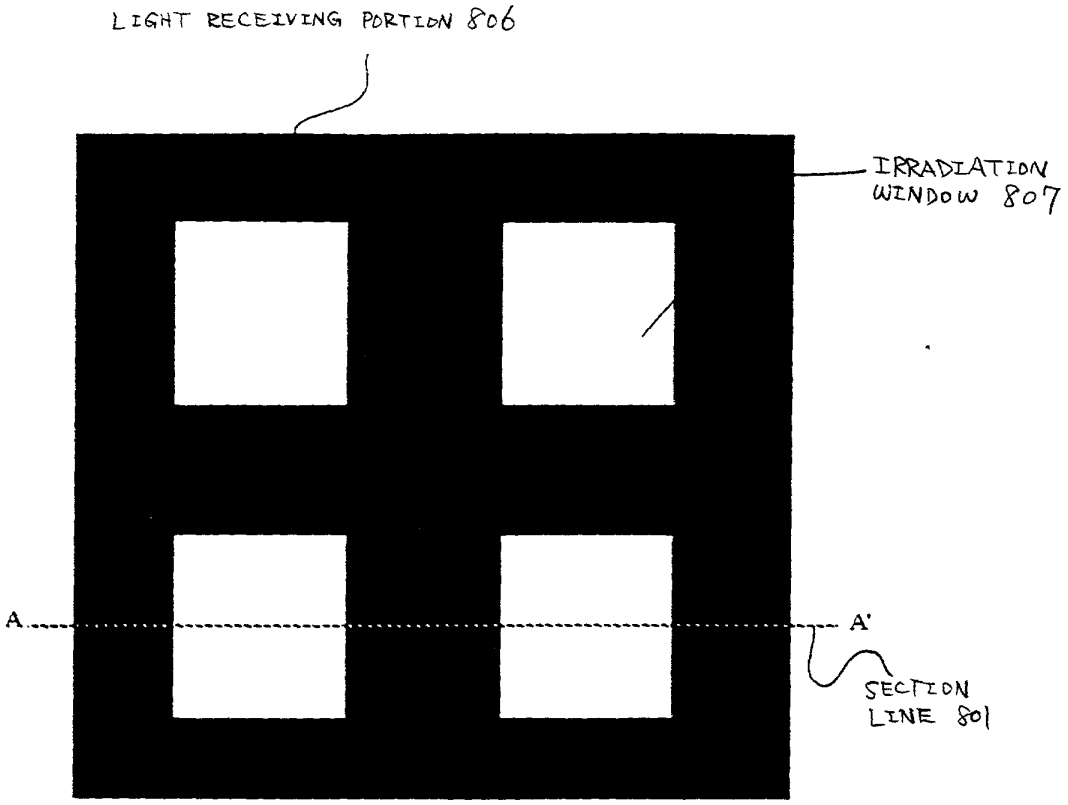

LIGHT RECEIVING PORTION 806
IRRADIATION WINDOW 807
A
A'
SECTION LINE 801

Fig. 8

Fig. 9

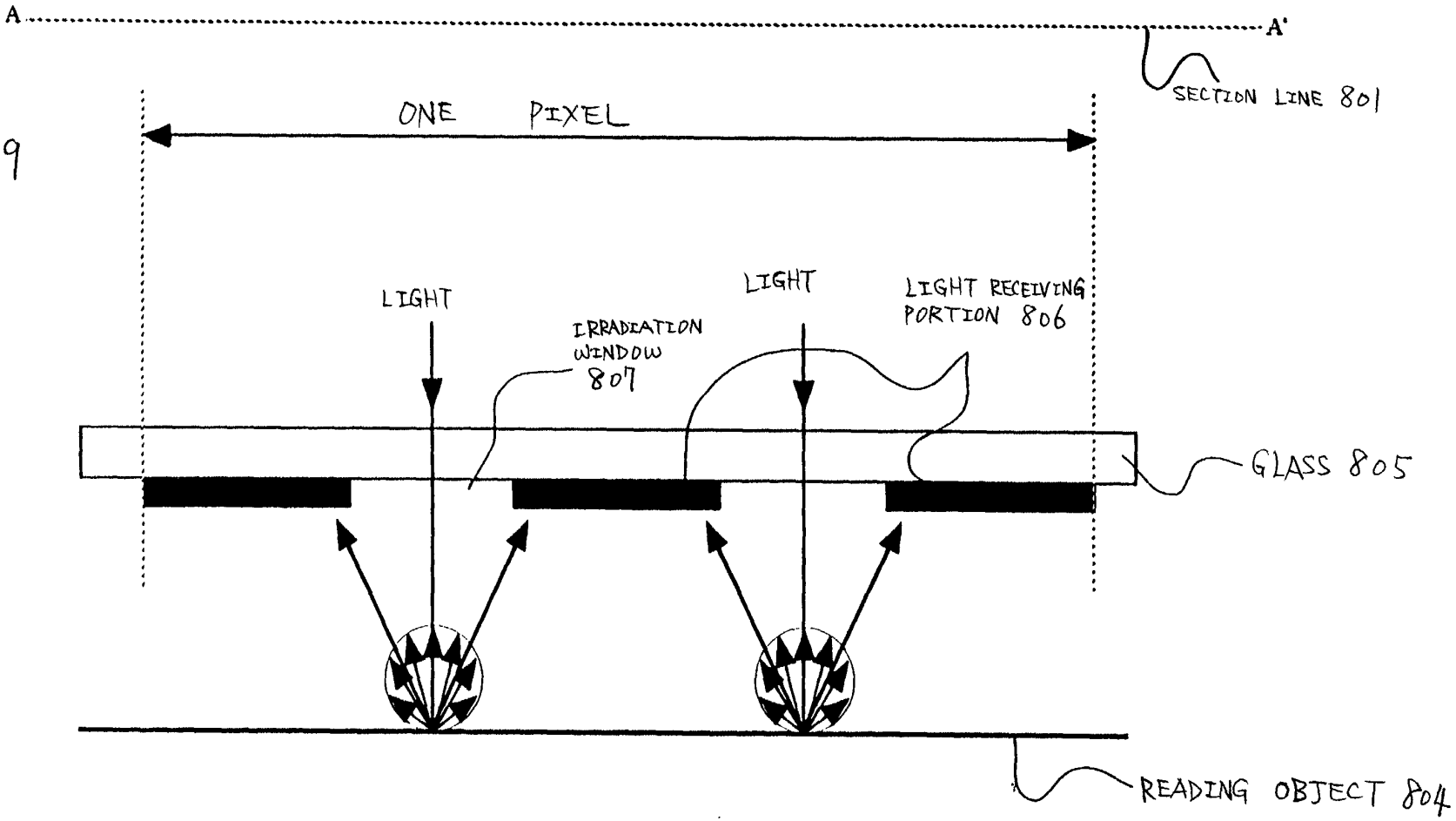
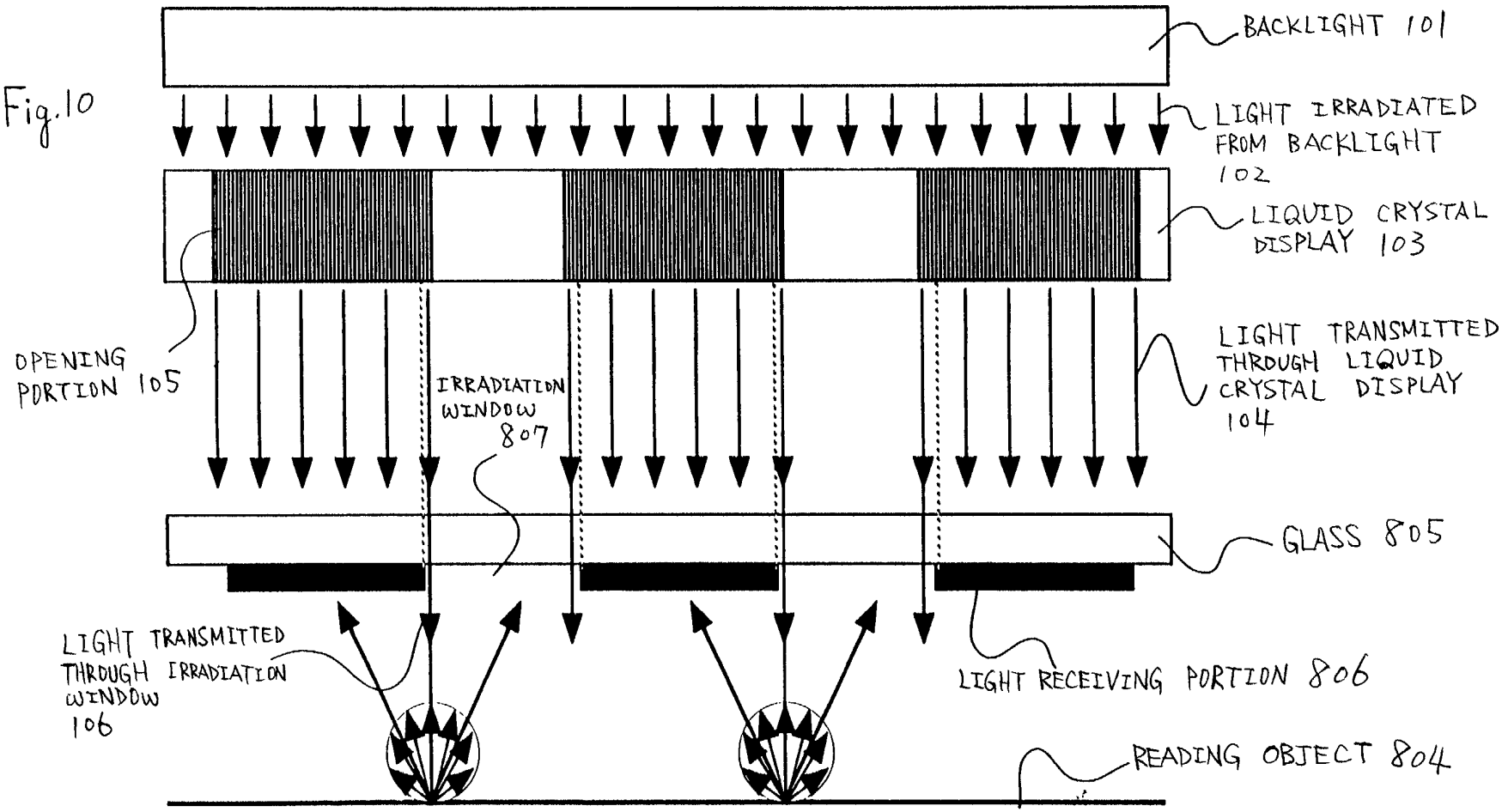

A
A'
SECTION LINE 801
ONE PIXEL
LIGHT
LIGHT
LIGHT RECEIVING PORTION 806
IRRADIATION WINDOW 807
GLASS 805
READING OBJECT 804

Fig.10


BACKLIGHT 101
LIGHT IRRADIATED FROM BACKLIGHT 102
LIQUID CRYSTAL DISPLAY 103
OPENING PORTION 105
IRRADIATION WINDOW 807
LIGHT TRANSMITTED THROUGH LIQUID CRYSTAL DISPLAY 104
GLASS 805
LIGHT TRANSMITTED THROUGH IRRADIATION WINDOW 106
LIGHT RECEIVING PORTION 806
READING OBJECT 804

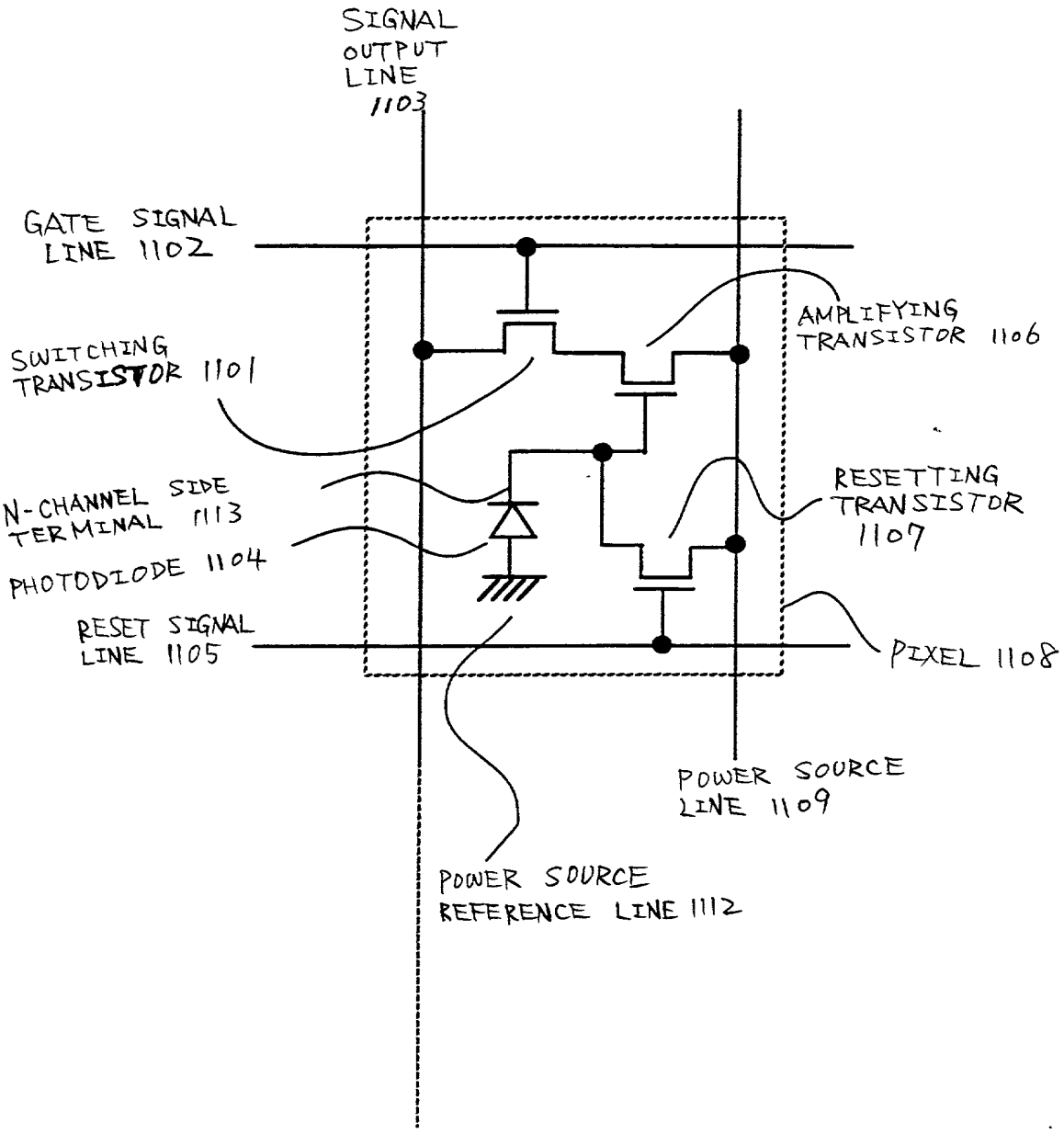

SIGNAL OUTPUT LINE 1103
GATE SIGNAL LINE 1102
SWITCHING TRANSISTOR 1101
AMPLIFYING TRANSISTOR 1106
N-CHANNEL SIDE TERMINAL 1113
PHOTODIODE 1104
RESETTING TRANSISTOR 1107
RESET SIGNAL LINE 1105
PIXEL 1108
POWER SOURCE LINE 1109
POWER SOURCE REFERENCE LINE 1112

Fig. 11

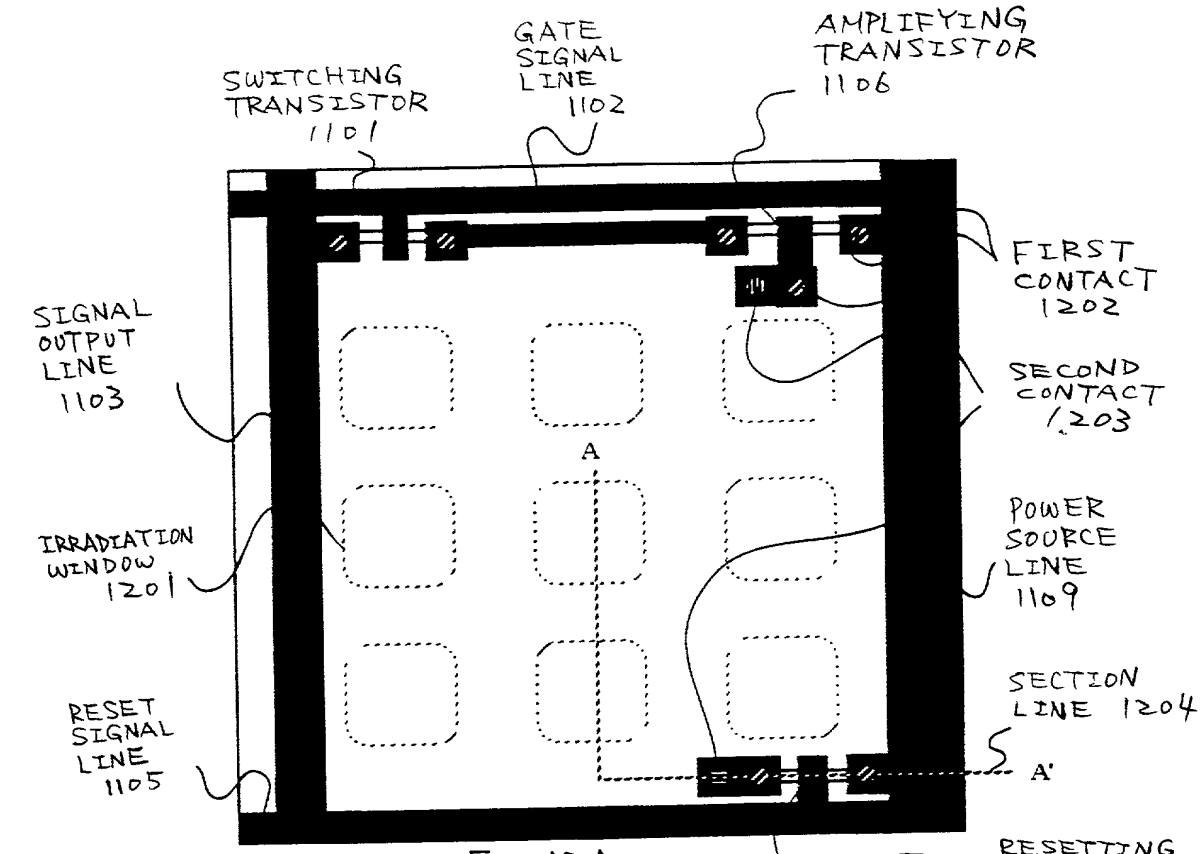


Fig. 12A

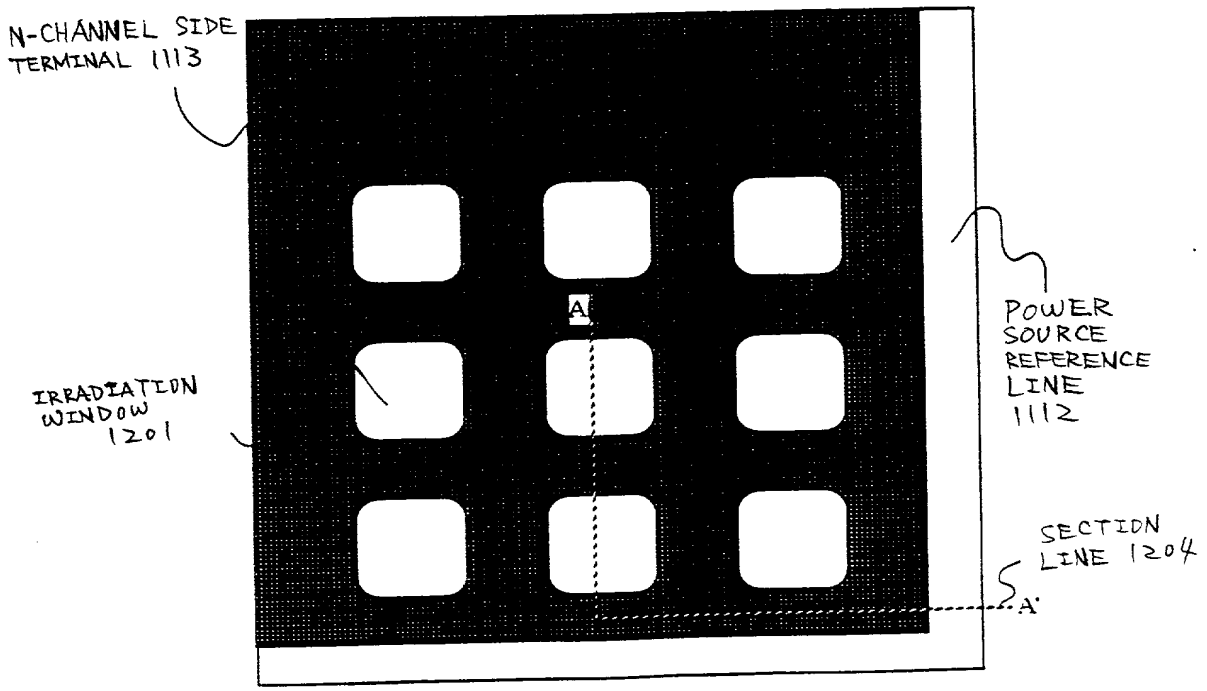
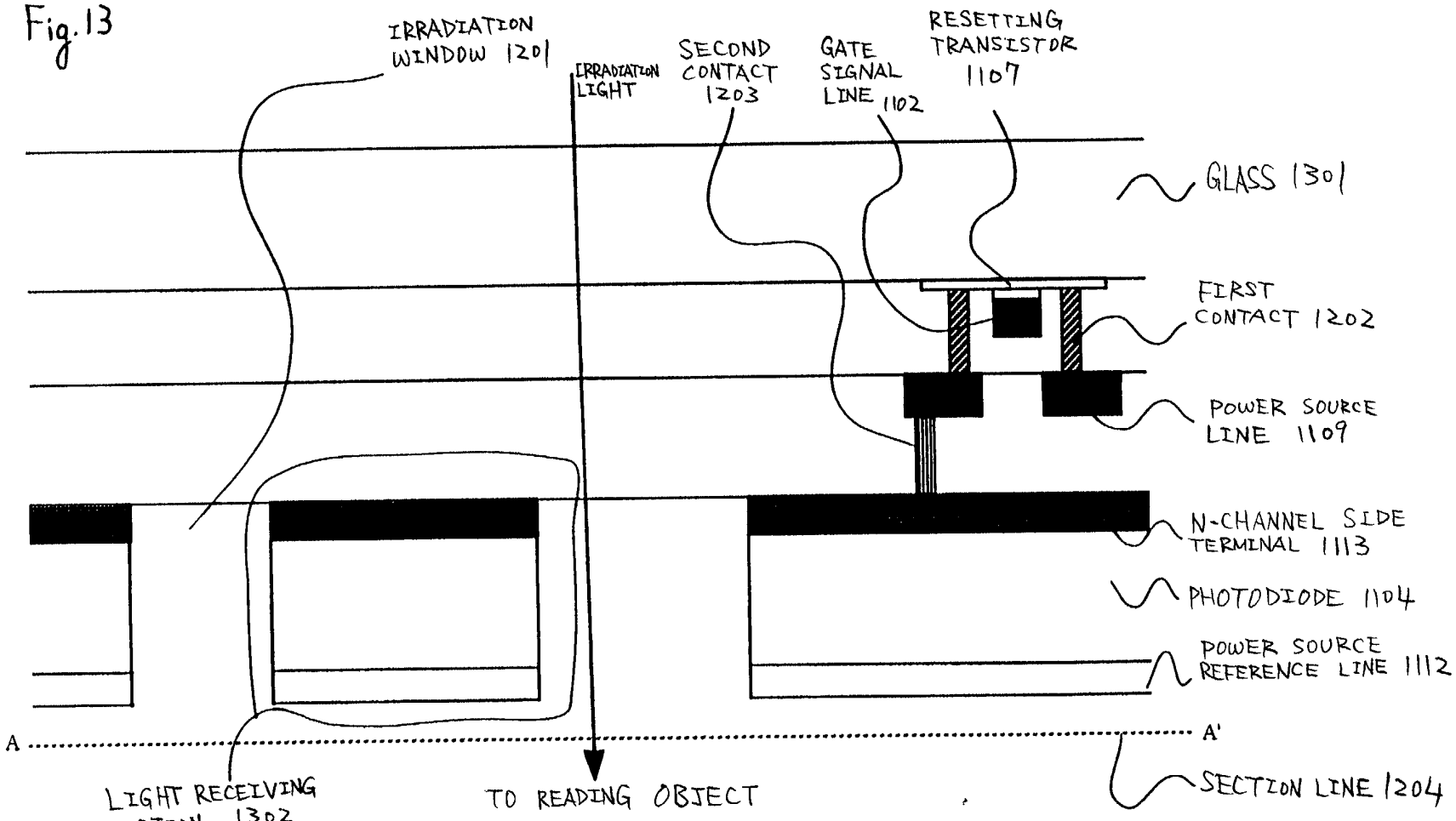


Fig. 12B

Fig. 13



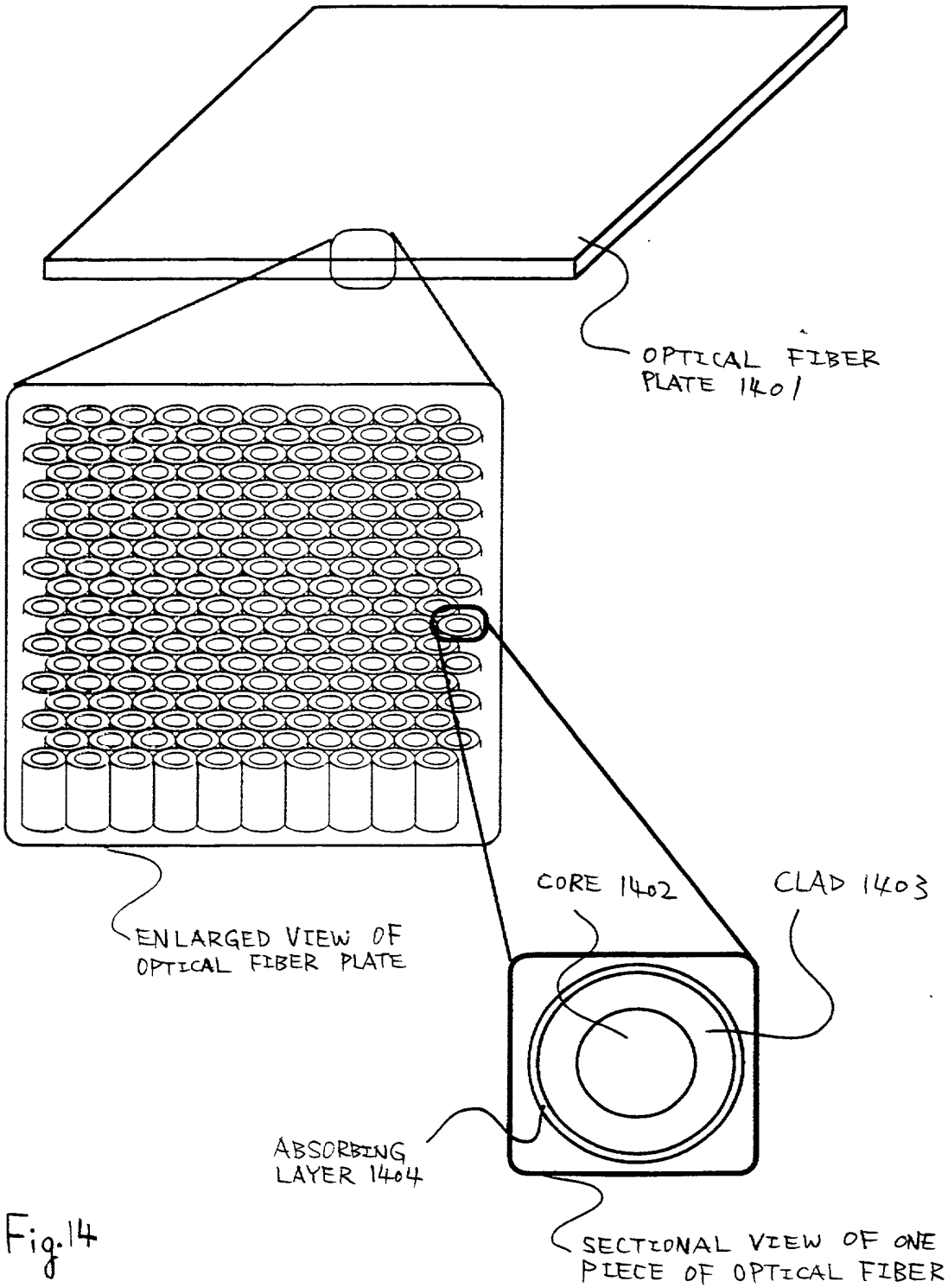


Fig. 14

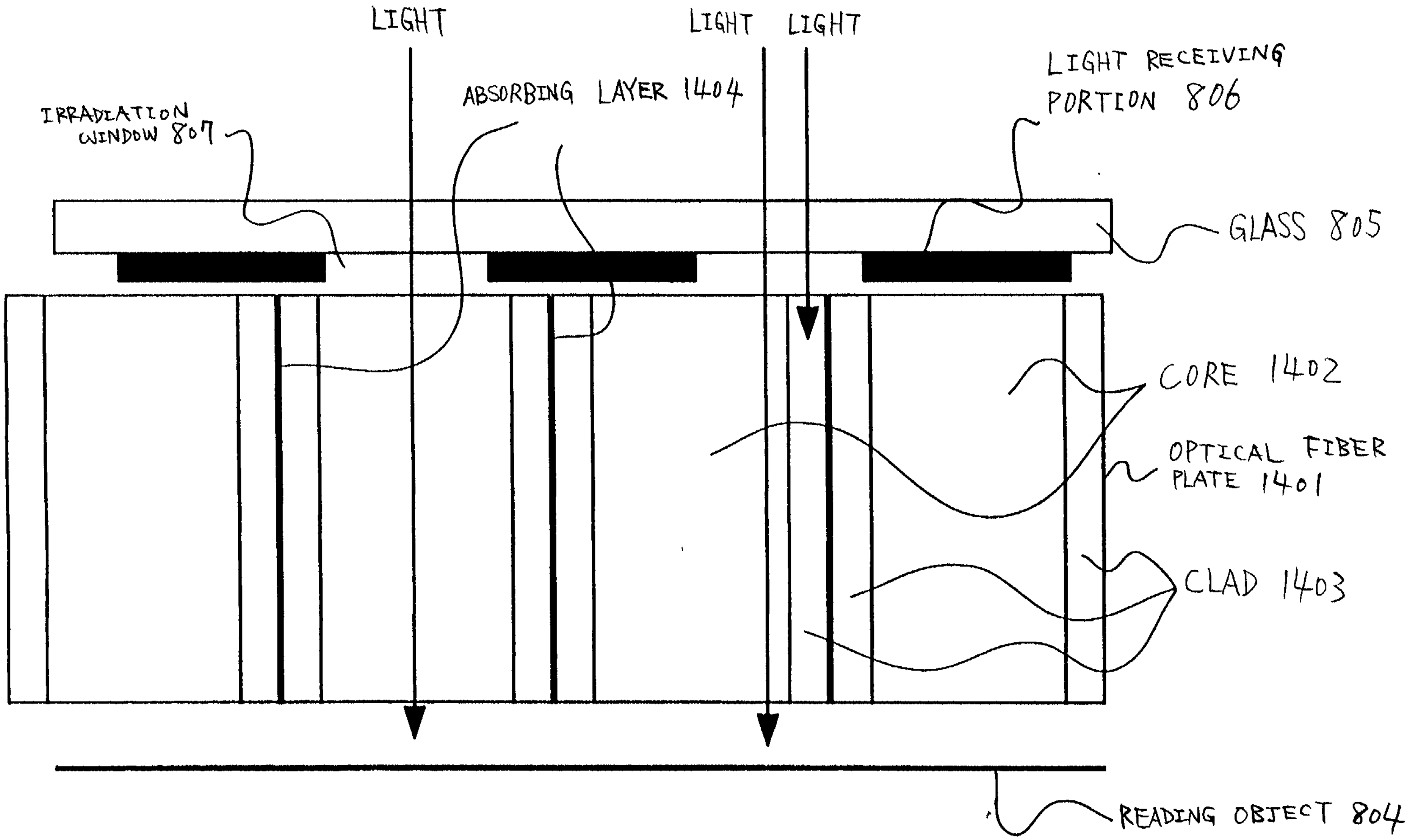

LIGHT
LIGHT
LIGHT
IRRADIATION WINDOW 807
ABSORBING LAYER 1404
LIGHT RECEIVING PORTION 806
GLASS 805
CORE 1402
OPTICAL FIBER PLATE 1401
CLAD 1403
READING OBJECT 804

Fig. 15

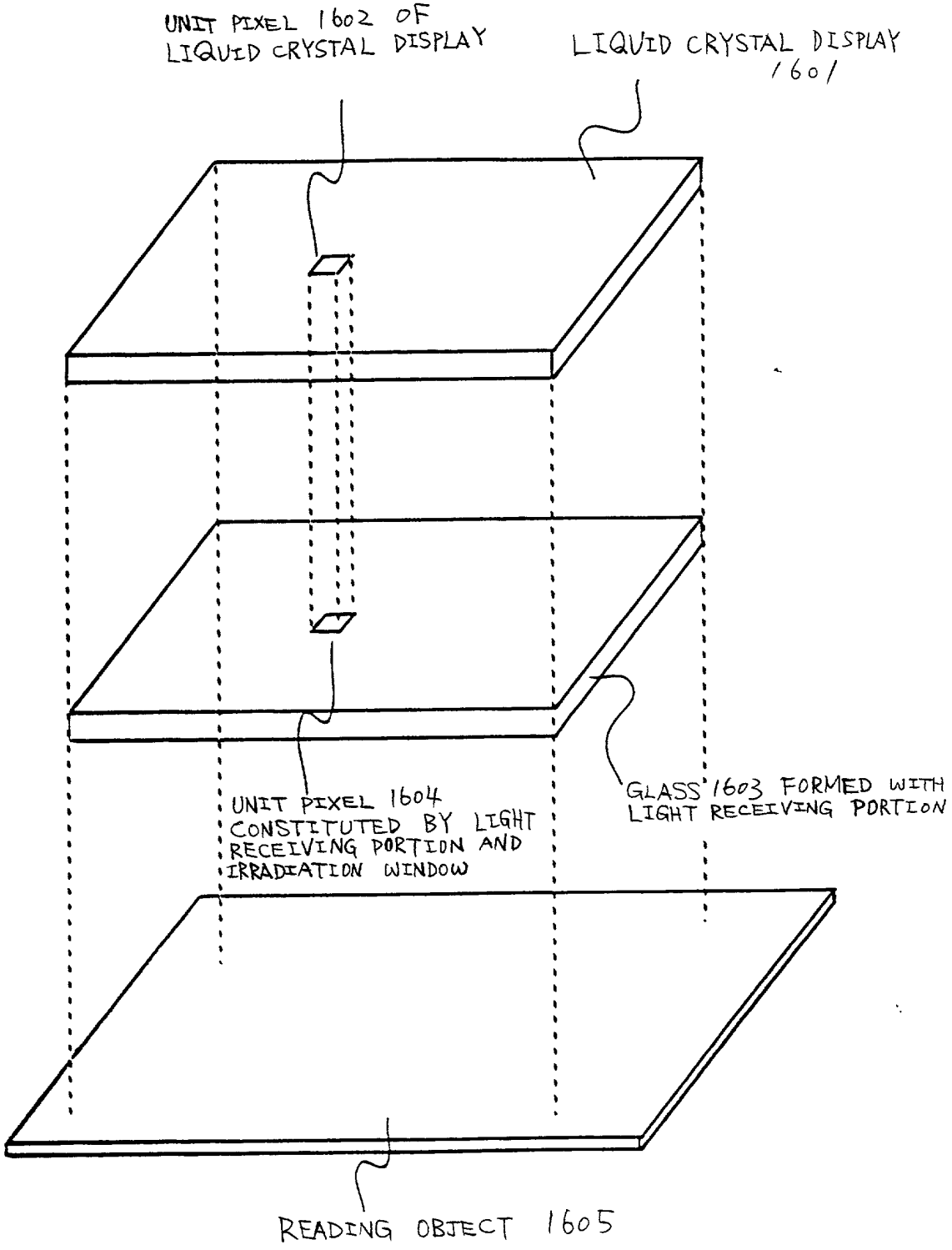

UNIT PIXEL 1602 OF LIQUID CRYSTAL DISPLAY
LIQUID CRYSTAL DISPLAY 1601
UNIT PIXEL 1604 CONSTITUTED BY LIGHT RECEIVING PORTION AND IRRADIATION WINDOW
GLASS 1603 FORMED WITH LIGHT RECEIVING PORTION
READING OBJECT 1605

Fig. 16

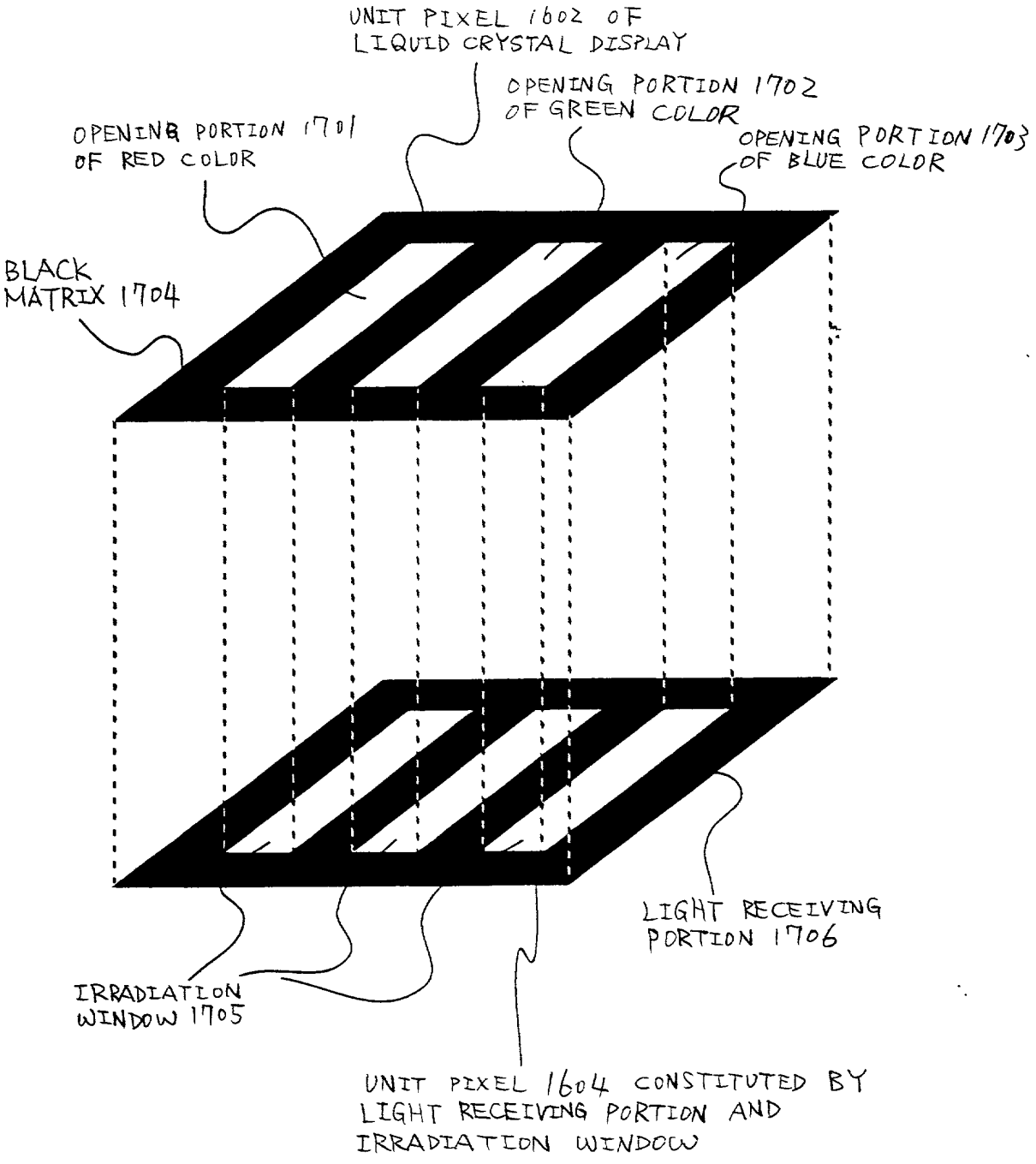

UNIT PIXEL 1602 OF
LIQUID CRYSTAL DISPLAY
OPENING PORTION 1702
OF GREEN COLOR
OPENING PORTION 1701
OF RED COLOR
OPENING PORTION 1703
OF BLUE COLOR
BLACK
MATRIX 1704
LIGHT RECEIVING
PORTION 1706
IRRADIATION
WINDOW 1705
UNIT PIXEL 1604 CONSTITUTED BY
LIGHT RECEIVING PORTION AND
IRRADIATION WINDOW

Fig. 17

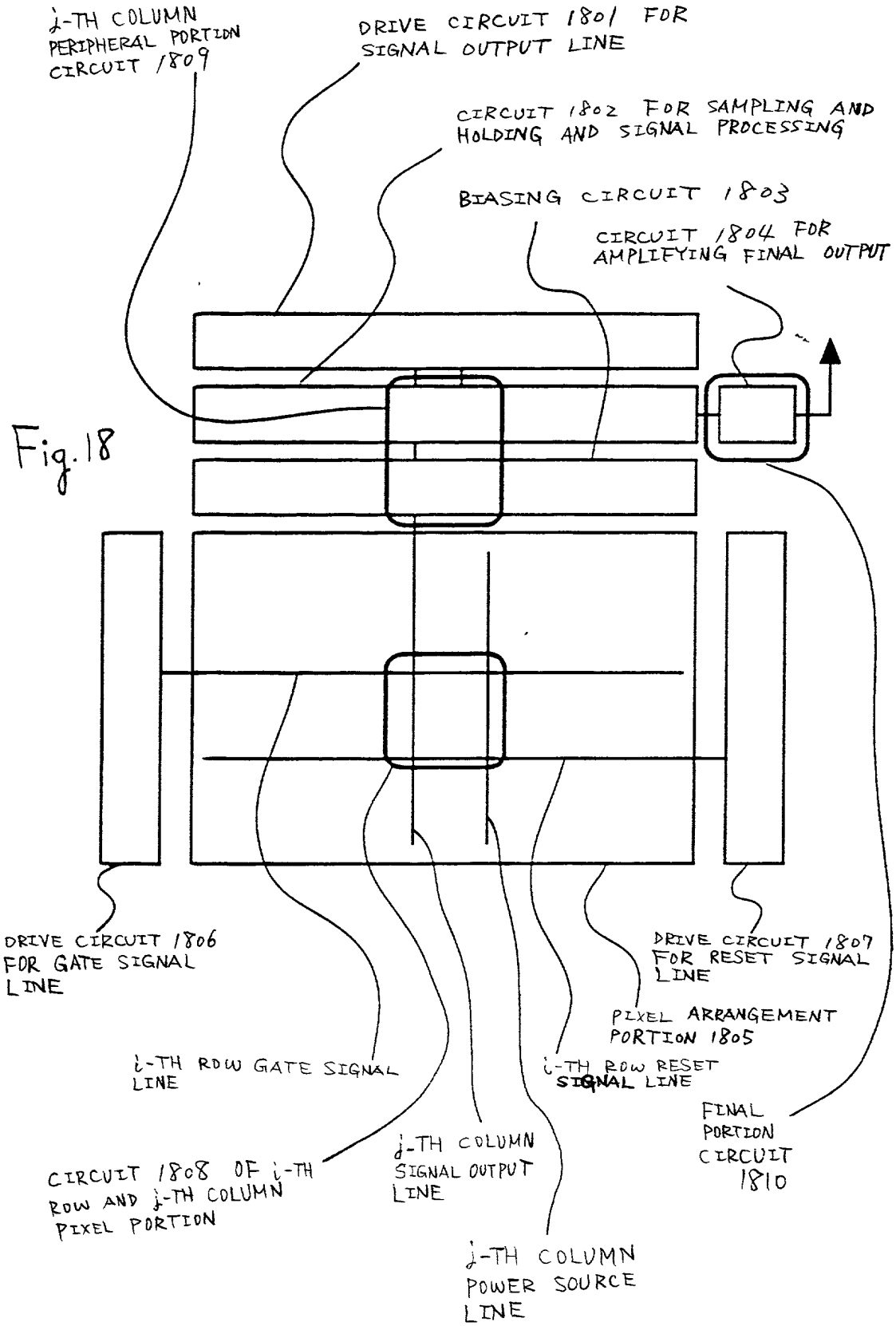


Fig. 18

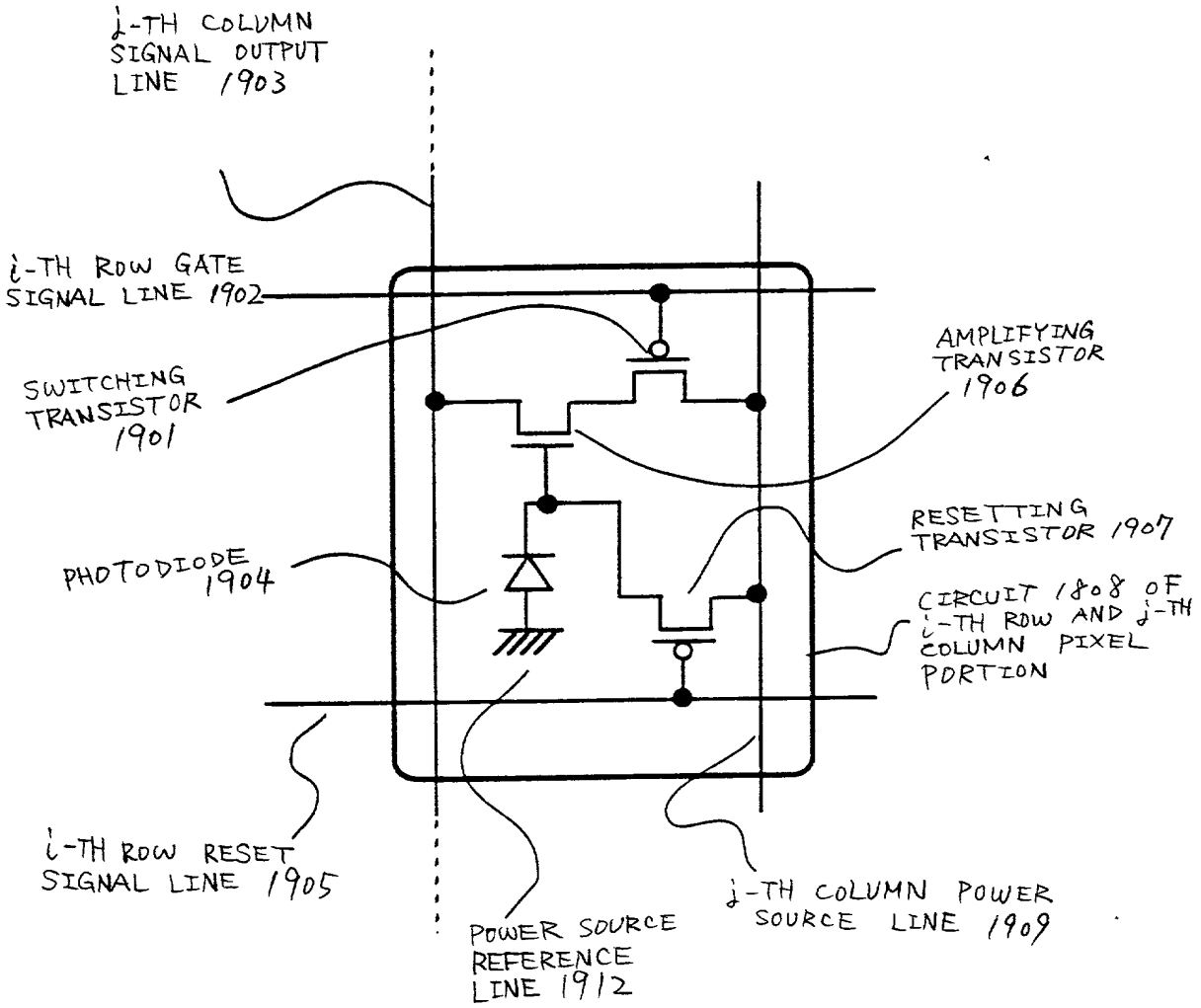

j-TH COLUMN SIGNAL OUTPUT LINE 1903
i-TH ROW GATE SIGNAL LINE 1902
SWITCHING TRANSISTOR 1901
AMPLIFYING TRANSISTOR 1906
RESETTING TRANSISTOR 1907
PHOTODIODE 1904
CIRCUIT 1808 OF i-TH ROW AND j-TH COLUMN PIXEL PORTION
i-TH ROW RESET SIGNAL LINE 1905
POWER SOURCE REFERENCE LINE 1912
j-TH COLUMN POWER SOURCE LINE 1909

Fig. 19

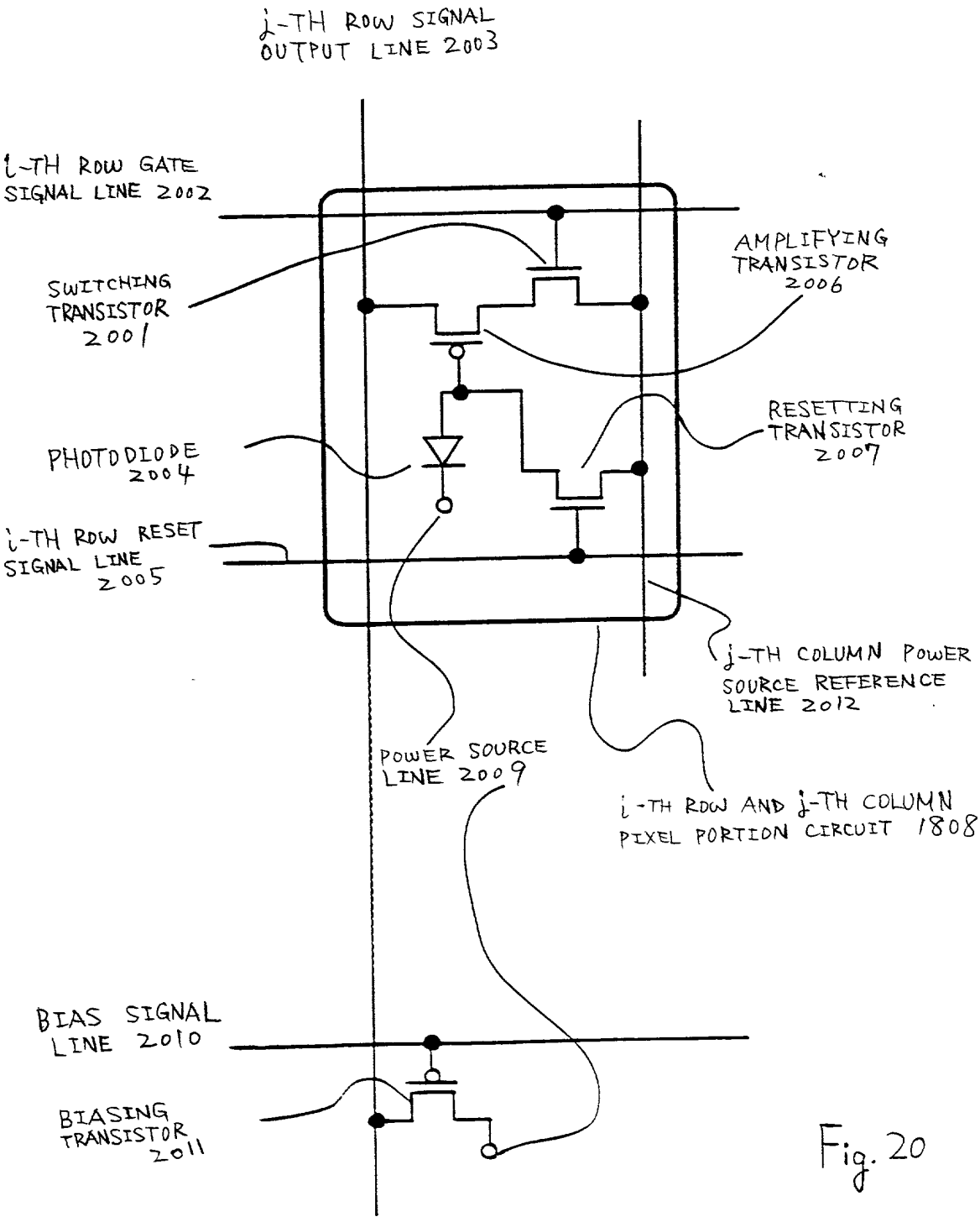

j-TH ROW SIGNAL OUTPUT LINE 2003
i-TH ROW GATE SIGNAL LINE 2002
SWITCHING TRANSISTOR 2001
AMPLIFYING TRANSISTOR 2006
RESETTING TRANSISTOR 2007
PHOTODIODE 2004
i-TH ROW RESET SIGNAL LINE 2005
j-TH COLUMN POWER SOURCE REFERENCE LINE 2012
POWER SOURCE LINE 2009
i-TH ROW AND j-TH COLUMN PIXEL PORTION CIRCUIT 1808
BIAS SIGNAL LINE 2010
BIASING TRANSISTOR 2011

Fig. 20

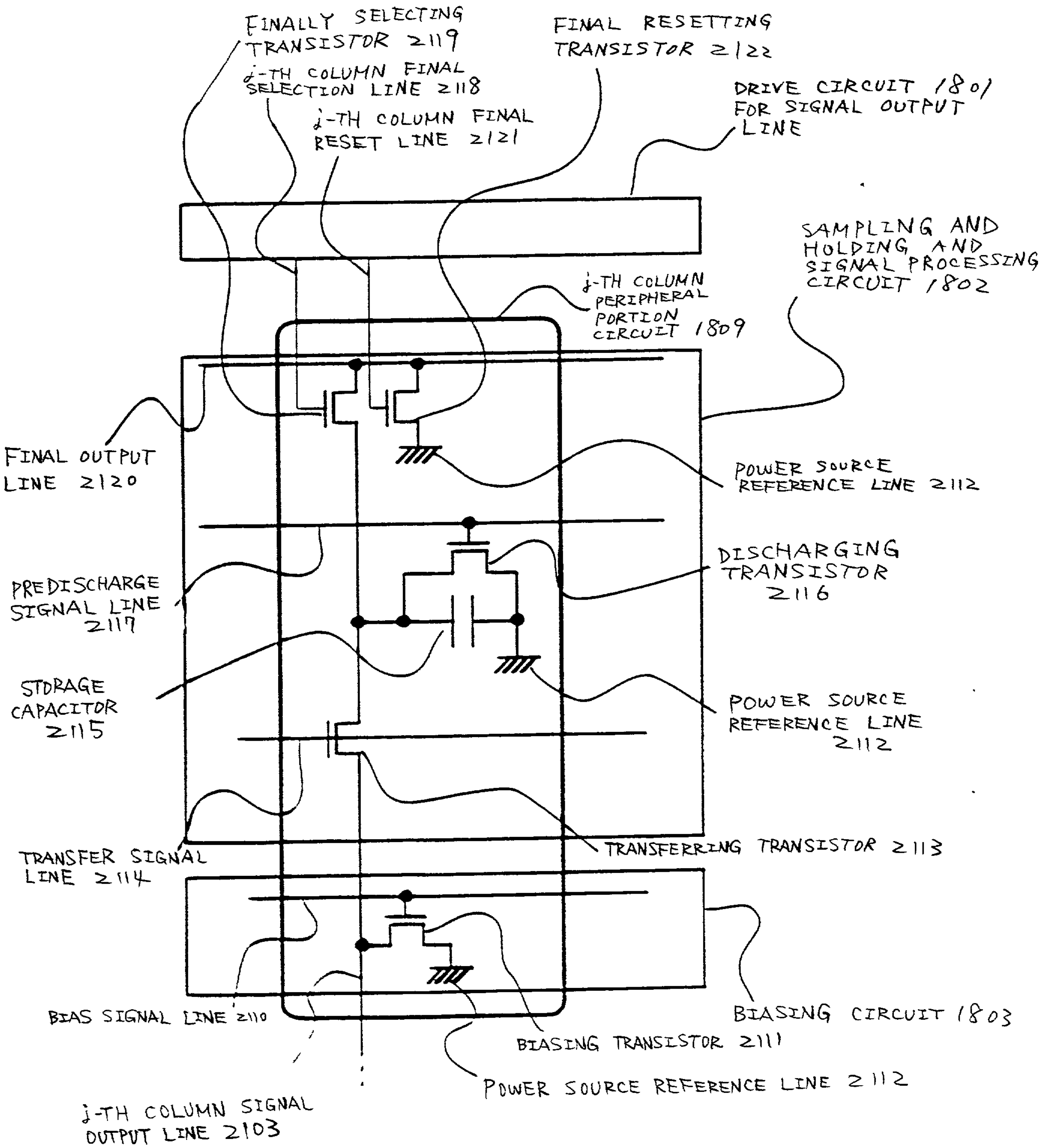

FINALLY SELECTING TRANSISTOR 2119
j-TH COLUMN FINAL SELECTION LINE 2118
j-TH COLUMN FINAL RESET LINE 2121
FINAL RESETTING TRANSISTOR 2122
DRIVE CIRCUIT 1801 FOR SIGNAL OUTPUT LINE
SAMPLING AND HOLDING AND SIGNAL PROCESSING CIRCUIT 1802
j-TH COLUMN PERIPHERAL PORTION CIRCUIT 1809
FINAL OUTPUT LINE 2120
POWER SOURCE REFERENCE LINE 2112
DISCHARGING TRANSISTOR 2116
PREDISCHARGE SIGNAL LINE 2117
STORAGE CAPACITOR 2115
POWER SOURCE REFERENCE LINE 2112
TRANSFERRING TRANSISTOR 2113
TRANSFER SIGNAL LINE 2114
BIAS SIGNAL LINE 2110
BIASING CIRCUIT 1803
BIASING TRANSISTOR 2111
POWER SOURCE REFERENCE LINE 2112
j-TH COLUMN SIGNAL OUTPUT LINE 2103

Fig. 21

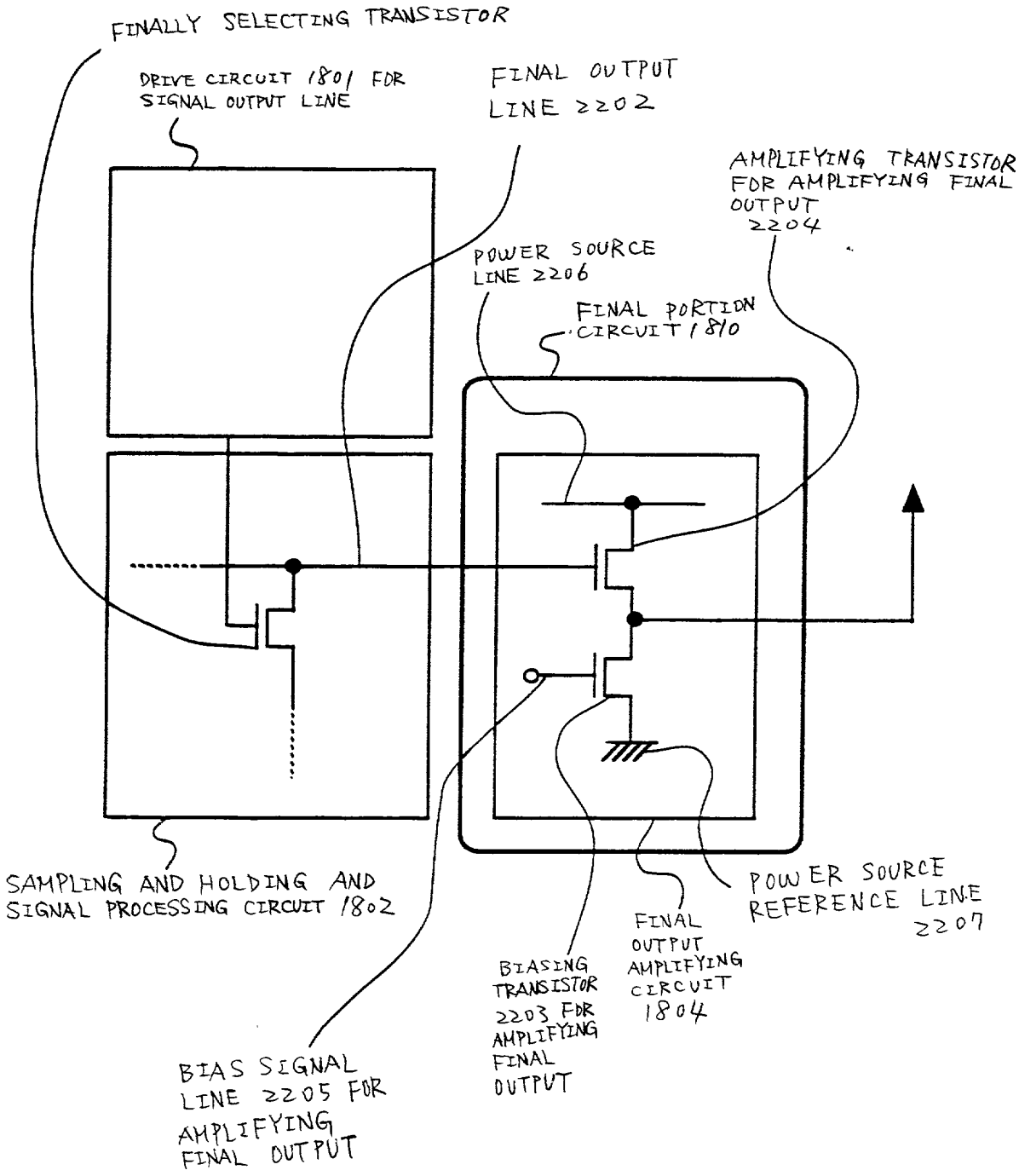

FINALLY SELECTING TRANSISTOR
DRIVE CIRCUIT 1801 FOR SIGNAL OUTPUT LINE
FINAL OUTPUT LINE 2202
AMPLIFYING TRANSISTOR FOR AMPLIFYING FINAL OUTPUT 2204
POWER SOURCE LINE 2206
FINAL PORTION CIRCUIT 1810
SAMPLING AND HOLDING AND SIGNAL PROCESSING CIRCUIT 1802
POWER SOURCE REFERENCE LINE 2207
FINAL OUTPUT AMPLIFYING CIRCUIT 1804
BIASING TRANSISTOR 2203 FOR AMPLIFYING FINAL OUTPUT
BIAS SIGNAL LINE 2205 FOR AMPLIFYING FINAL OUTPUT

Fig. 22

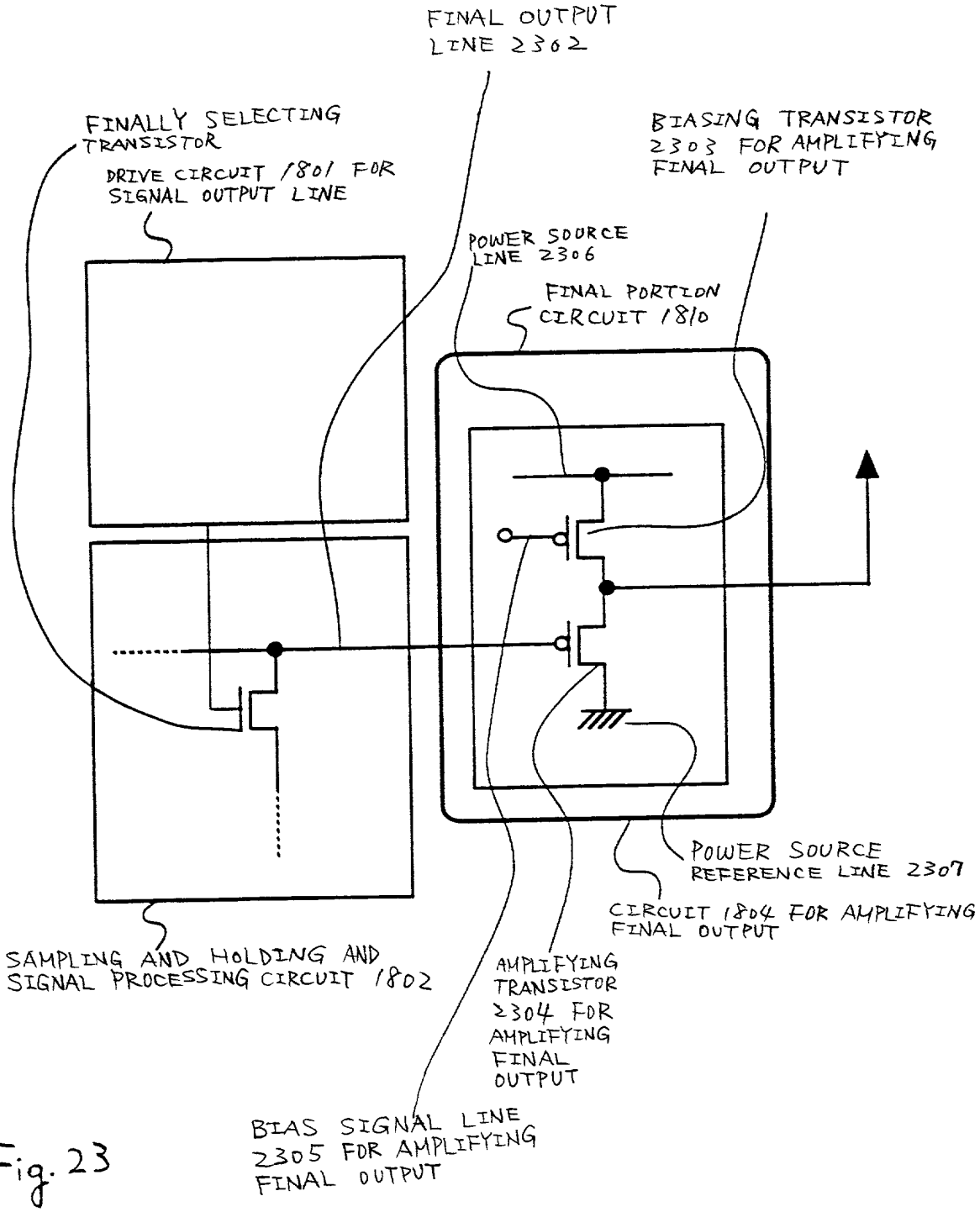


Fig. 23

Fig. 24

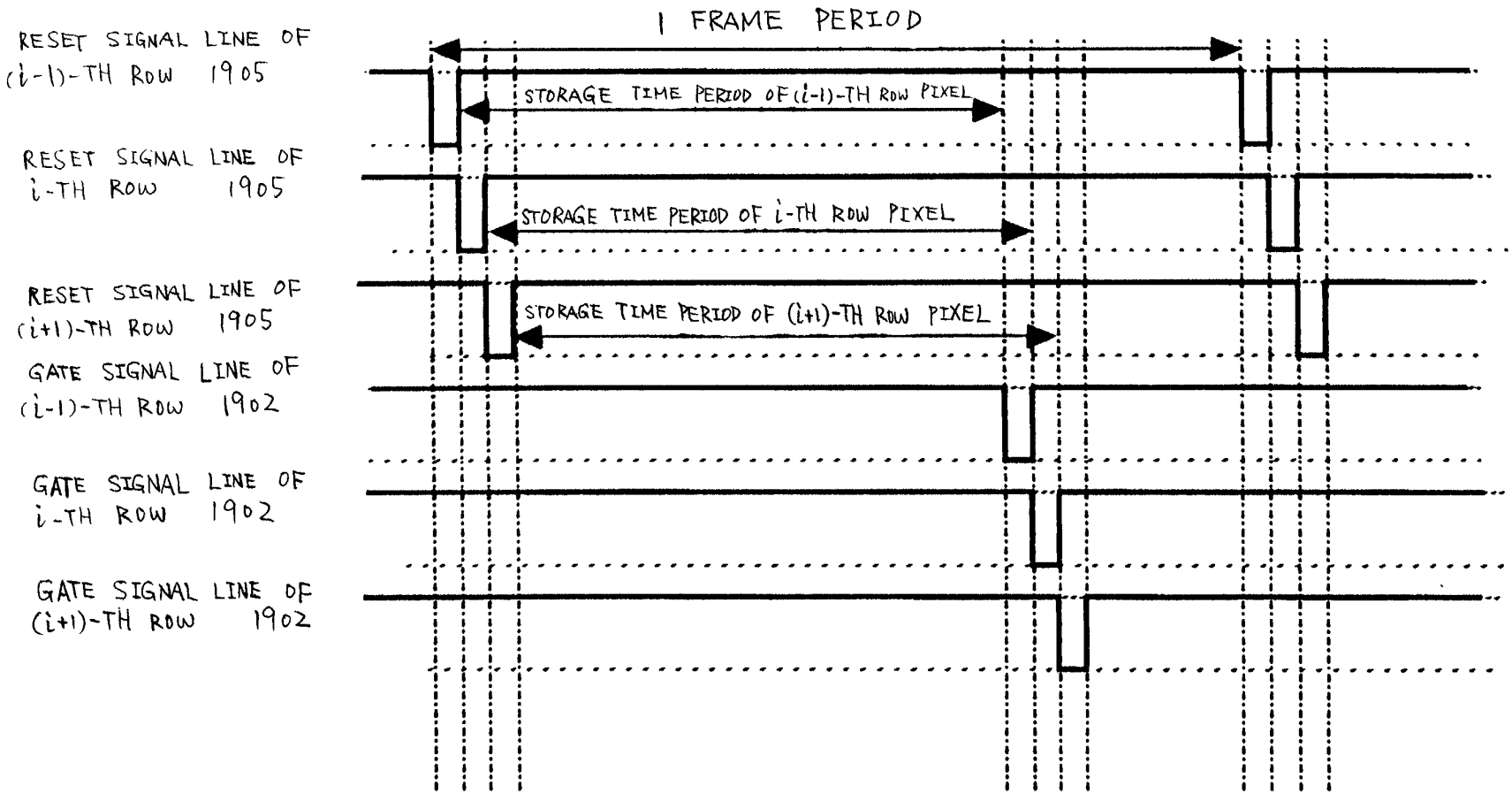


Fig. 25

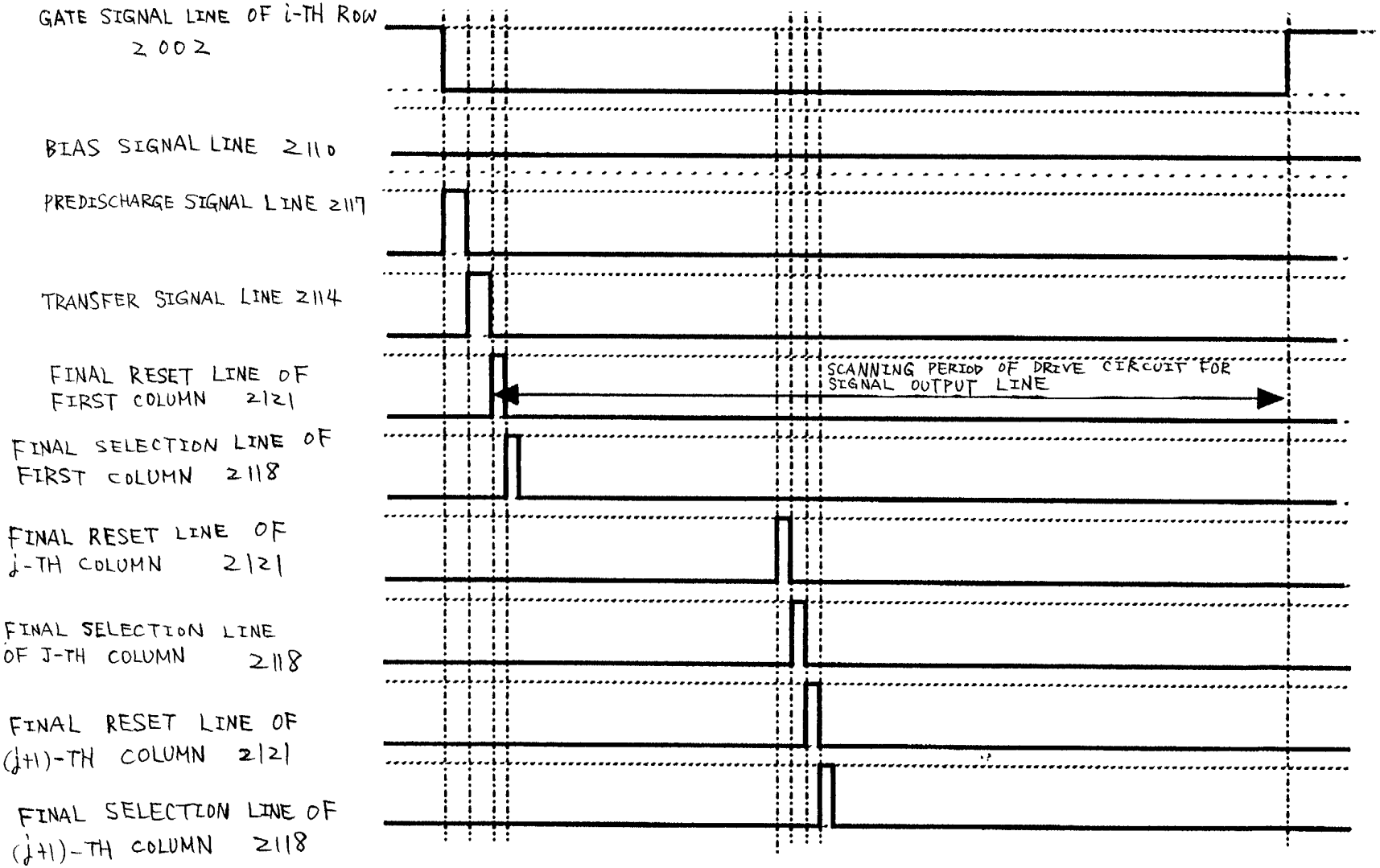

GATE SIGNAL LINE OF i-TH ROW
2002
BIAS SIGNAL LINE 2110
PREDISCHARGE SIGNAL LINE 2117
TRANSFER SIGNAL LINE 2114
FINAL RESET LINE OF FIRST COLUMN 2121
SCANNING PERIOD OF DRIVE CIRCUIT FOR SIGNAL OUTPUT LINE
FINAL SELECTION LINE OF FIRST COLUMN 2118
FINAL RESET LINE OF j-TH COLUMN 2121
FINAL SELECTION LINE OF J-TH COLUMN 2118
FINAL RESET LINE OF (j+1)-TH COLUMN 2121
FINAL SELECTION LINE OF (j+1)-TH COLUMN 2118

Fig. 26A CRYSTALLIZATION STEP

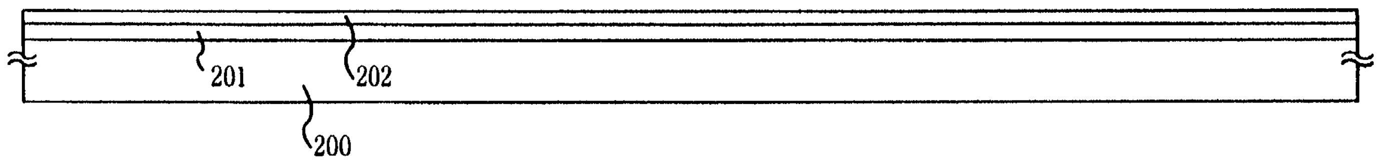


Fig. 26B

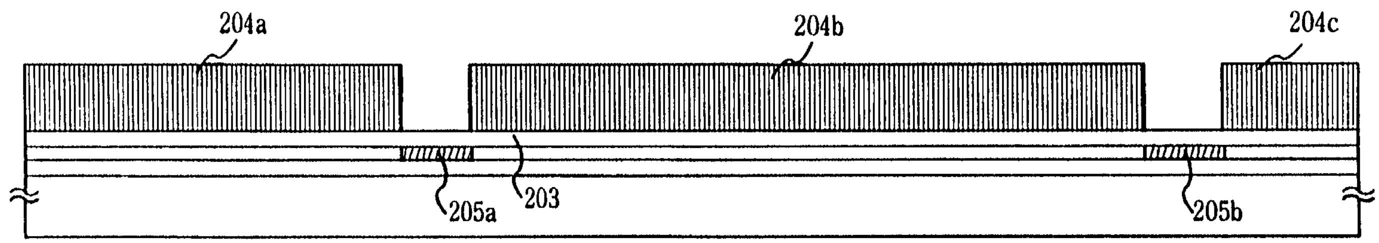


Fig. 26C LASER ANNEALING STEP

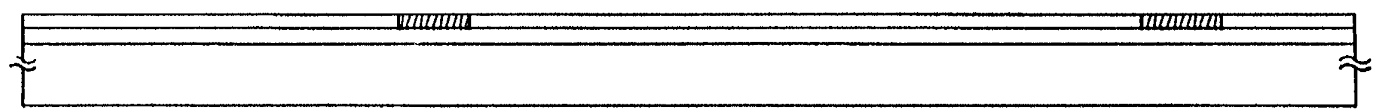


Fig. 26D

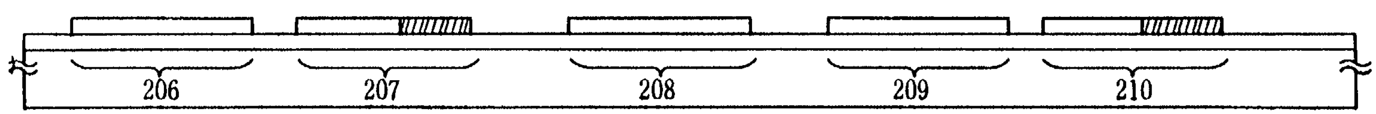


Fig. 27A

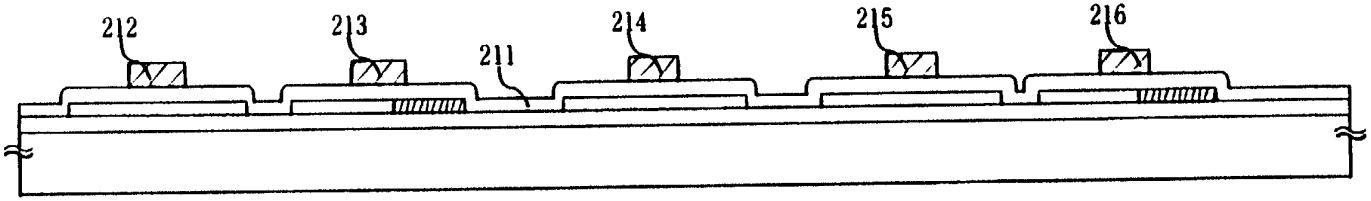


Fig. 27B

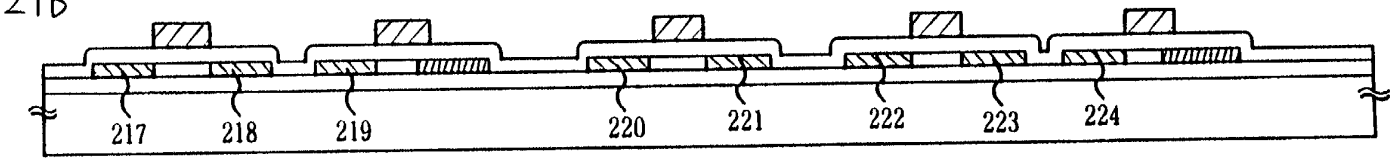


Fig. 27C

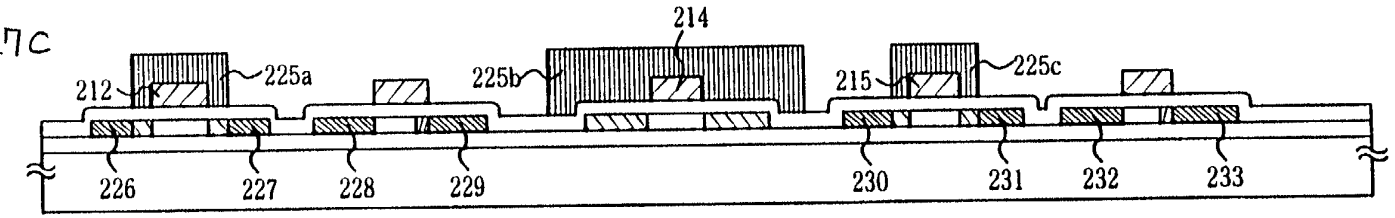


Fig. 27D

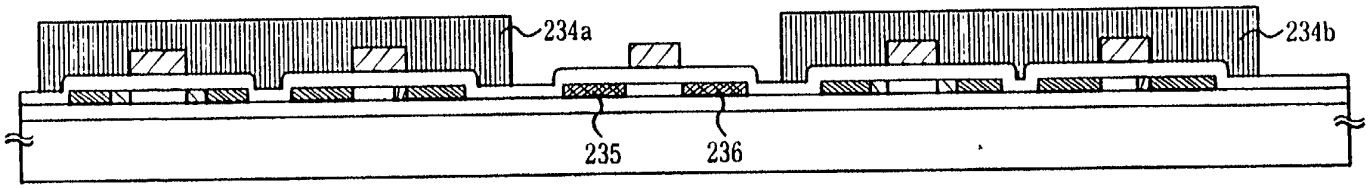


Fig. 28A

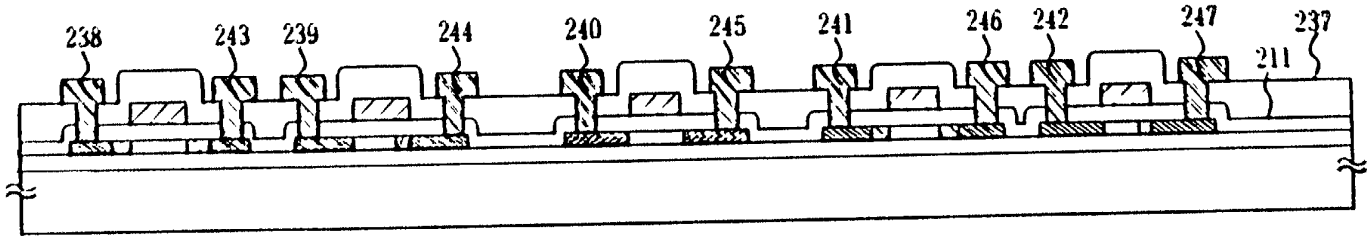


Fig. 28B

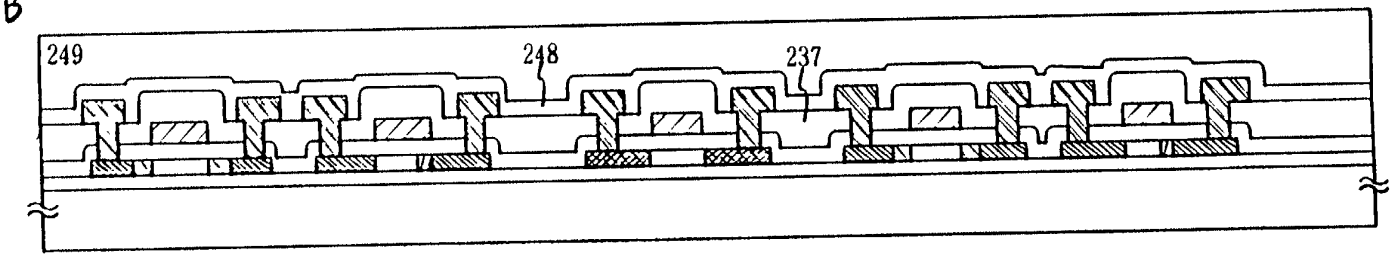


Fig. 28C

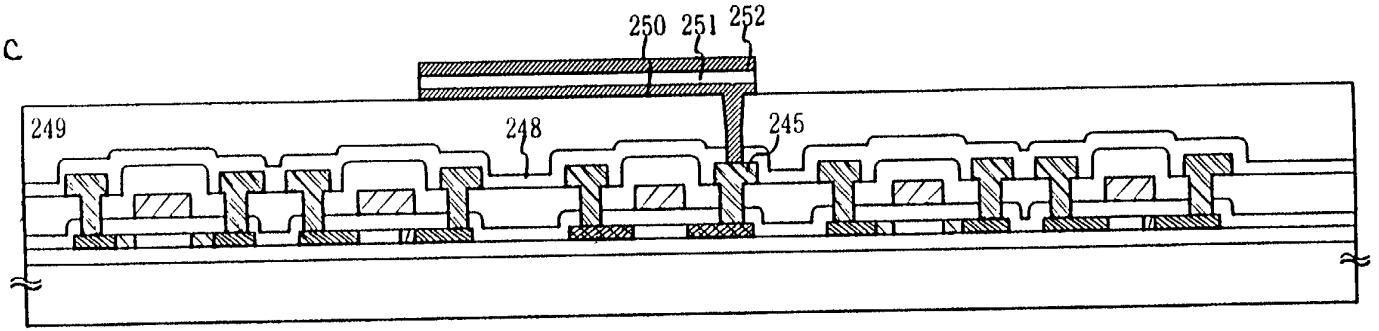


Fig. 29A

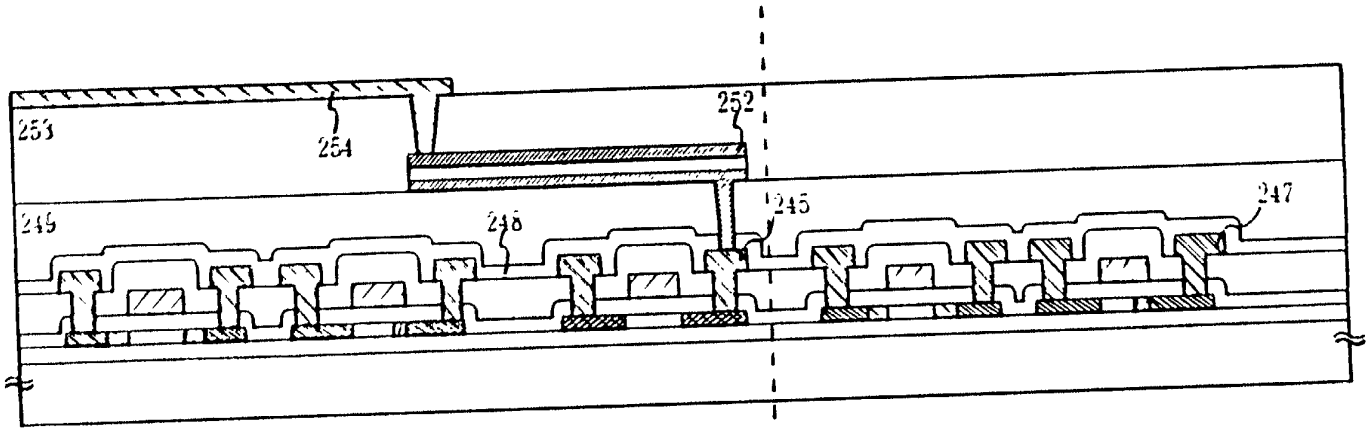
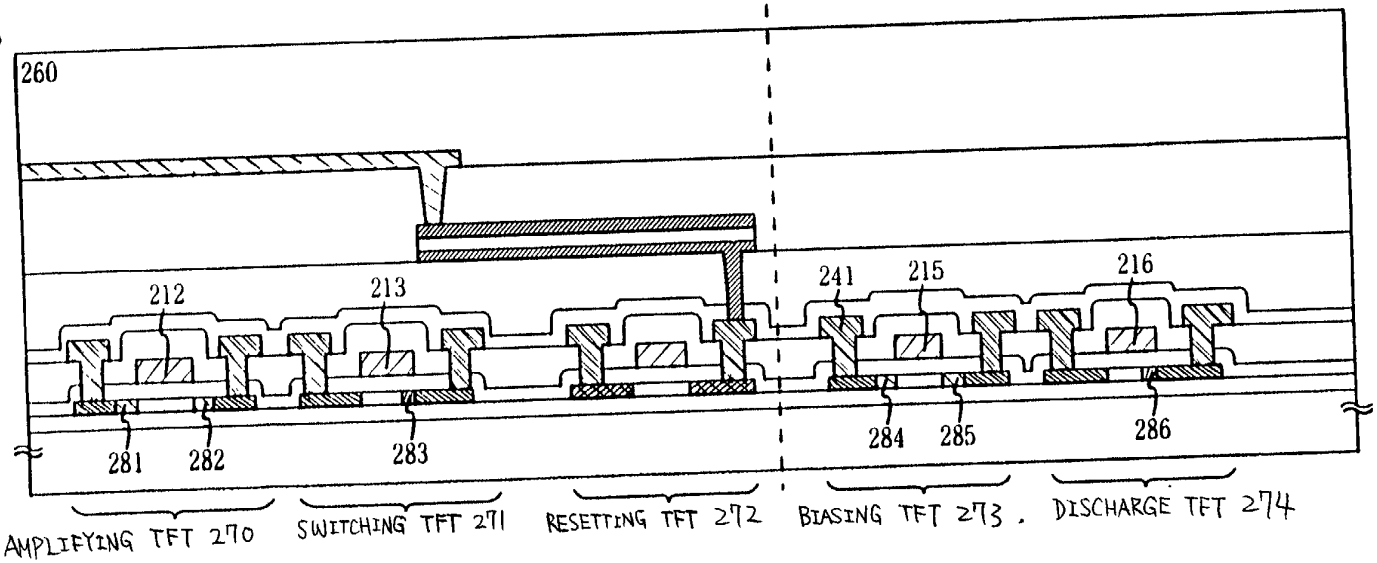


Fig. 29B



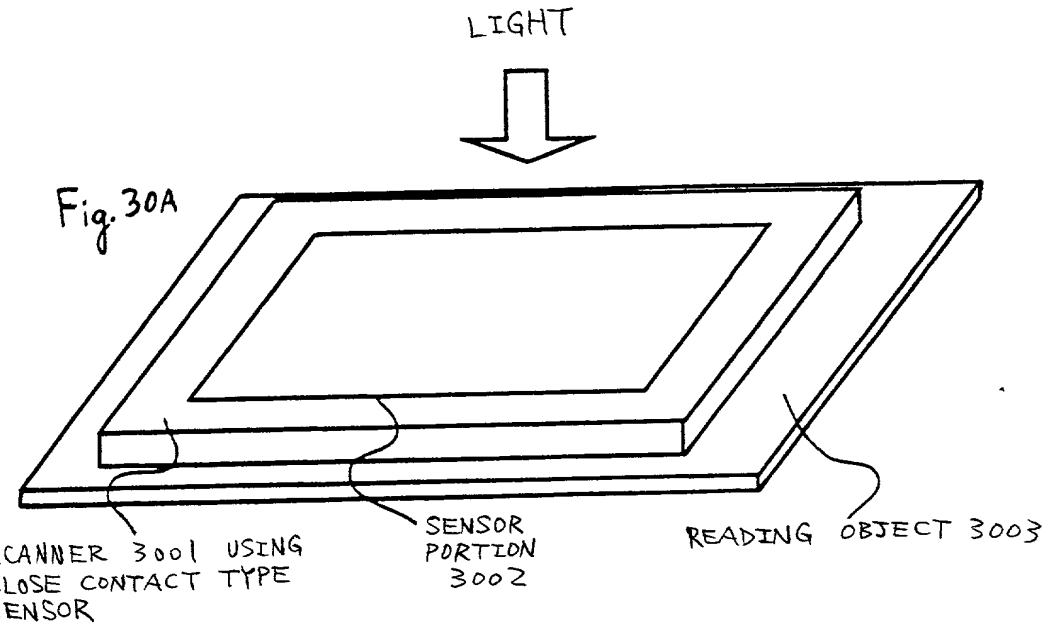


Fig. 30A

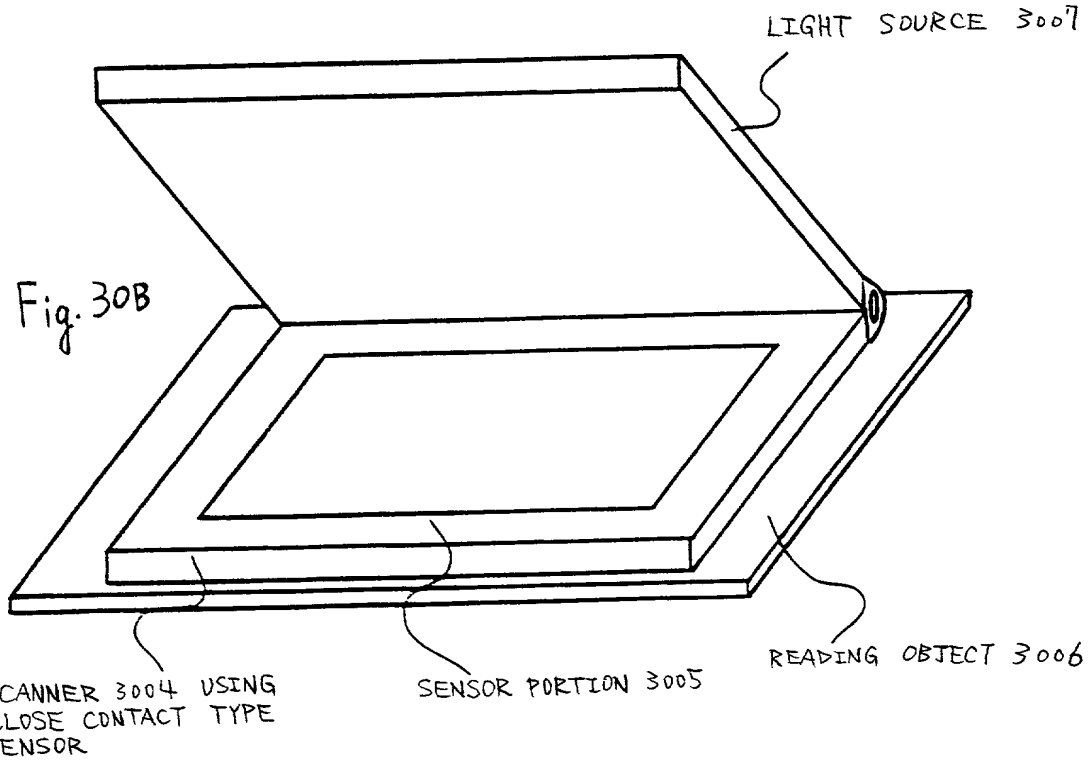


Fig. 30B

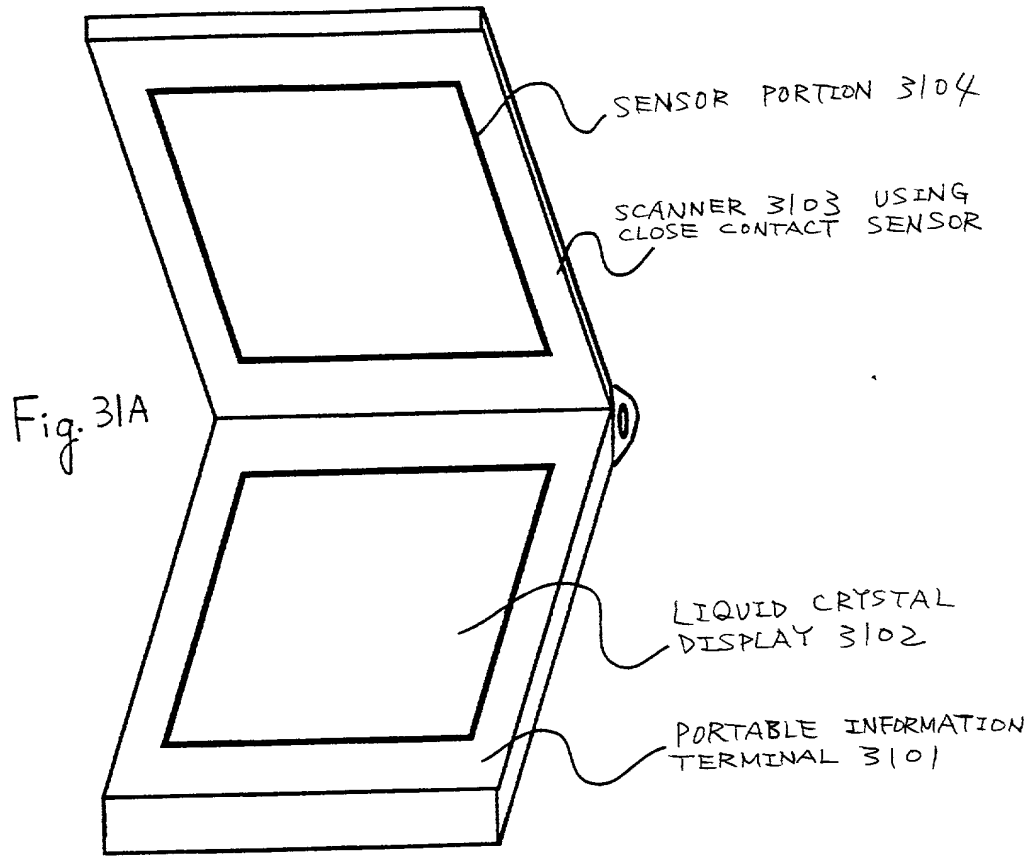


Fig. 31A

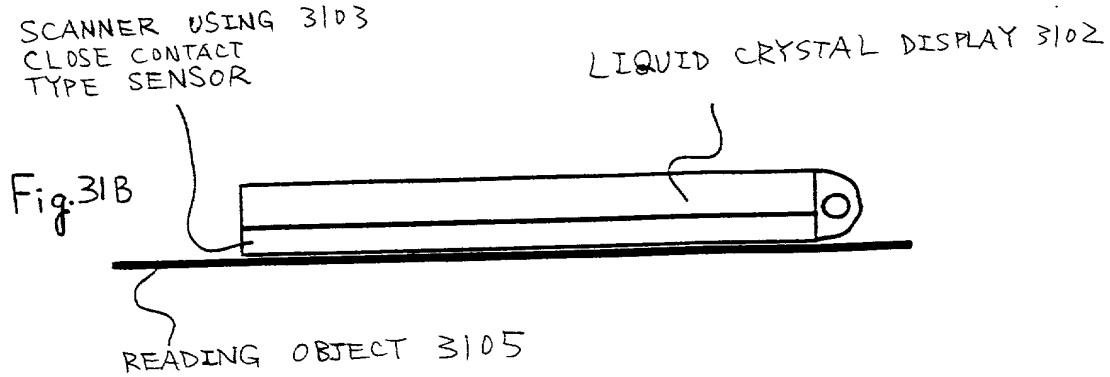


Fig. 31B